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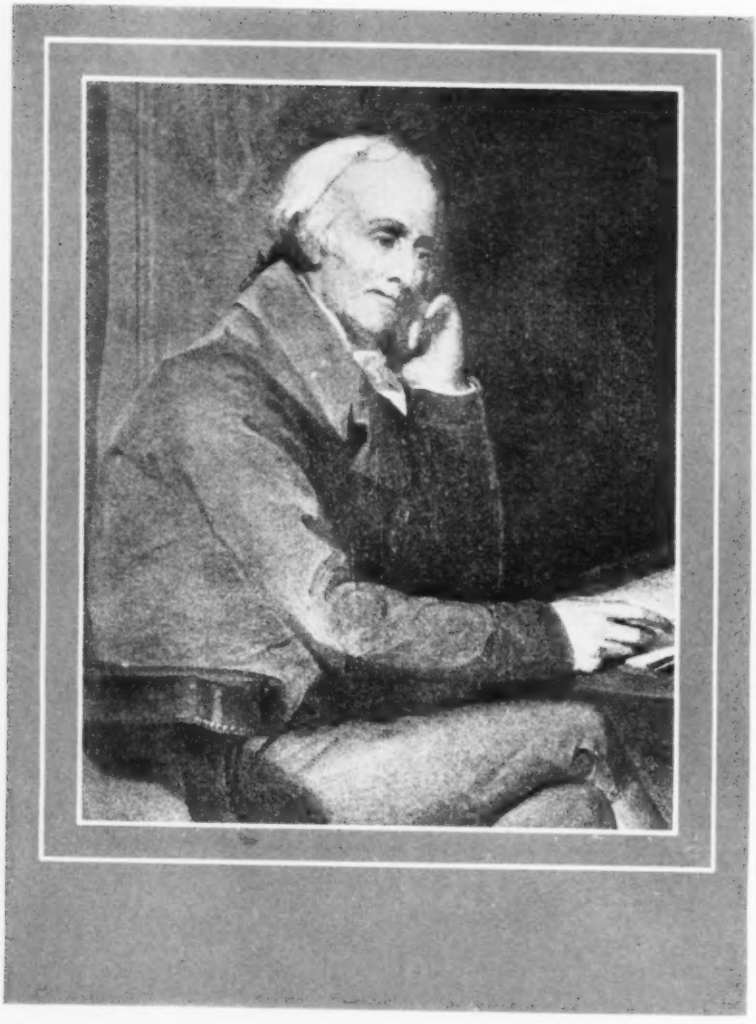


BENJAMIN RUSH, M.D.

Courtesy, *Med. Rev. of Rev.*

CLINICAL MEDICINE AND SURGERY

VOLUME 38 MAY, 1931 NUMBER 5

Dr. Benjamin Rush

IN THE early days of the American Colonies, what few physicians there were among the settlers came, like the other people, from across the sea. It takes time for a new community to develop to the point where it needs or can support medical schools, so that the first real institution of the kind was the Medical Department of the University of Pennsylvania, founded, in 1765, by Drs. Morgan and Shippen.

The first strictly American physician (though his medical degree was gained abroad) to gain wide prominence, and one of the conspicuous examples of the dictum that the value a man sets upon himself is likely to be accepted by the world in general, was Benjamin Rush, who was born, of English Quaker stock (his father was a gunsmith), in Byberry (now a part of Philadelphia), Pa., in 1745; was graduated from the College of New Jersey (Princeton) at the rather callow age of fifteen years; received his medical degree from the University of Edinburgh, Scotland, after six years of apprenticeship to a doctor in Philadelphia and two in that institution, in 1768; spent another year studying in London and Paris; and, returning home at the end of that year, entered practice and was made professor of chemistry in the Medical College of Philadelphia, thus beginning a long and active career as a teacher, interrupted by his official activities during the Revolutionary War.

Being keenly and outspokenly interested in public affairs, Dr. Rush was elected to the Continental Congress and was a signer of the Declaration of Independence. Soon thereafter he was made surgeon general of the Middle Department of Washington's army, under William Shippen. He took part in several of the battles of that war, but, in 1778, he deserted Washington at Valley Forge, to join the notorious "Conway Cabal," and returned to his professorship.

Upon the death of Dr. John Morgan, in 1789, Rush succeeded him as professor of the practice of medicine in the College of Philadelphia and, when that institution was merged with the University of Pennsylvania, in 1791, became professor of the "institutes of medicine" in the combined school.

During this time he was active in medical and educational matters, being physician to the Pennsylvania Hospital (where he introduced bedside instruction) and one of the founders of Dickinson College, the College of Physicians and the Philadelphia Dispensary (the first in this country). His

public activities also continued, for he was treasurer of the United States Mint from 1799 until his death, of typhus fever, in 1813, and was one of the earliest and most earnest advocates of the abolition of slavery.

These, in brief, are the chief historic facts in the life of a man who is spoken of as a "physician, patriot, statesman and philanthropist," and was called, rather fulsomely, in his own time, "the Sydenham of America," and even "the Hippocrates of Pennsylvania." But *facts* do not always (nor, perhaps, often) give one an accurate idea of *the truth*, and it is worth while to gain such an idea, when it is possible to do so.

All seem to unite in the opinion that Rush was a successful teacher. He had a strong and pleasing voice, a free flow of words, a dignified and dominant personality, cultured and pleasing manners and a belief in himself and his ideas which amounted almost to egomania. His lectures were frequently phrased and delivered like sermons, because he was one of the pioneer prohibitionists, as well as an abolitionist, and his crusading zeal, in these as in other matters, resembled that of many of his modern followers in being wholly devoid of a sense of humor.

He repudiated the teaching of Hippocrates, that Nature is the great healer, and openly urged that the physician should strive to supplant Nature in the sick room. He also believed and taught that, the more abominable the taste of a drug, the more likely it was to be therapeutically potent.

Rush observed his cases closely and wrote of them in detail, being the first to describe cholera infantum; the first in America to paint a word picture of dengue; and one of the first to call attention to thermal fever. But believing himself to be all-wise and infallible, he seems to have been quite unable to learn anything from his observations, so that the books he wrote were an inextricable tangle of accurately described signs and symptoms, with wholly unfounded reasoning upon them and with dogmatic, empiric, inaccurate and sometimes disastrous precepts as to treatment.

Garrison speaks of him as "a typical 18th century theorist." In reply to Rush's pompous epigram, "Medicine is my wife and Science is my mistress," the inimitable Dr. Oliver Wendell Holmes remarked (in 1867), "I do not think that this breach of the seventh commandment can be shown to have been of advantage to the legitimate owner of his affections."

During the great epidemic of yellow fever in Philadelphia, in 1793, Dr. Rush's professional labors among the sick were almost unbelievable. It is reported that he often saw 100, and sometimes 150 patients in a day. For this we must render him our admiration. But he conceived the idea that the pestilence was caused by spoiled coffee and was not at all contagious, and he was convinced that the only treatment necessary consisted of gigantic doses of calomel and jalap, with bleeding almost to the point of exsanguination. Once he made up his mind about a subject, that conclusion become like the laws of the Medes and Persians, which change not, and he was wholly impervious alike to logic and to entreaties and forced his m i s t a k e n notions upon the large body of practitioners who looked upon him as the supreme authority. As evidence of his wrong-headed sincerity, it must be recorded that, when he himself sickened with a light attack of the malady, he submitted to his own line of therapy with praiseworthy fortitude.

His stiffnecked and combative disposition involved him in many bitter controversies and even lawsuits with his contemporaries, and he was even, on at least one occasion, challenged to a duel, which he refused.

It would be a thankless task to attempt to detract from the luster of the fame of this world-renowned physician and public servant, and nothing of that sort is desired. Rush was a man of high mental endowment (with the operation of which his emotions

sometimes interfered) and great energy and sincerity. He was the most prominent figure at the birth of American Medicine, even though, as Victor Robinson says, he fussed over the baby until he nearly spoiled it.

It is well that we should have as sound a knowledge as possible of the truth regarding the historic figures of the medical profession, but such an evaluation should never interfere with the respect and admiration with which we regard their worthy deeds, and may enable us to learn valuable lessons from their mistakes, if such appear to have been made.

Scientific men agree to suspend judgment when they do not know.—J. B. S. HALDANE.

MATERNITY CARE

WHETHER those are right who declare that the death rate of women during labor and the puerperium, in the United States, is higher than that of any other allegedly civilized nation; or whether there is weight in the contention of others that, because statistics are kept differently in various countries, there is no valid basis for comparisons, the fact remains that *too many mothers* (approximately 16,000) *die each year in the United States from causes connected with pregnancy and childbirth.*

The remedy is "adequate maternity care"; but what does that mean? When should it begin? Of what should it consist and how long should it be continued?

Properly speaking, the care of a mother should begin when she is four or five years old, by giving her sound instruction, supplemented as she grows older, on the care of her body, the nature of sex and the responsibilities of motherhood. She will then approach that ordeal and opportunity in the best physical, emotional and mental condition.

Failing this, her care should begin on *the day when she first realizes that she is pregnant.* From that time on, she should be under the regular observation of her physician until her baby is six or eight weeks old. The public should be informed of these facts.

The job of the medical advisor—if this shocking slaughter of mothers is to be stopped—is a good deal more than merely making a more or less perfunctory uranalysis once a month. The prospective mother should have a *complete examination,* including indicated laboratory studies and a full history, when she is first seen, and from then on, any suspicious points should be checked every week or two, to be sure that danger does not threaten. The condition and position of the child should also be looked into from time to time. As labor approaches, these professional attentions should be increased in thoroughness and frequency.

But examinations are not enough. If abnormalities are found, *something should be done, at once, to correct them.* Many are coming to believe that *every* pregnant woman should receive ultraviolet irradiations (or, if these are not available, then viosterol) and calcium by mouth, as a routine, and that all who are not suffering from thyrotoxicosis should be given *intelligently regulated* doses of thyroid substance. Such a course of action should bring her to labor in good condition and assure a well developed and healthy fetus.

Obstetric teaching and practice, in this country, still leave much to be desired. Too few physicians who are attending maternity cases are adequately instructed in that art. Too many medical accoucheurs are in such a hurry that they resort to unnecessary surgery or ill-advised examinations—often performed carelessly—instead of giving the forces of Nature a chance to do their beneficient work. It is a disgrace to the profession that, in some localities, the maternal mortality and morbidity is less among cases attended by midwives than in those cared for by physicians.

These matters should be in our minds at all times; but particularly during this

month of May when, on the tenth, Mothers' Day is celebrated, the Medical profession, individually and collectively, should be putting forth strenuous efforts to educate the public and themselves in the ways to save from the terrible handicap of motherlessness the 16,000 babies who, without our help, will be thus afflicted during this year of grace.

It is far better to be trained to understand a few matters thoroughly, than to have a superficial knowledge of a great many things.—Sir James Mackenzie.

Common Sense

SCARCELY a conversation of fifteen minutes' duration takes place that the expression, common sense, is not used by one or other of the speakers. And yet, in spite of its universal popularity, few persons actually have a clear idea of what they mean when they say those words. Usually they seem to imply that the man who is said to possess this quality has a sound and rational perception of fundamental values; but no such idea is inherent in the words themselves.

The dictionary defines *common* as: "Belonging equally to more than one; public; usual; frequent; inferior." The last of these definitions obviously does not fit the case; the first and second are more or less synonymous, and so are the third and fourth; and these latter two are ruled out by the trite paradox to the effect that "common sense is a most uncommon attribute." If the opinion mentioned above as the probable consensus is truly so, this bromide is perfectly valid, even if timeworn.

This reduces us to the first interpretation of the word, "Belonging equally to more than one," which, when applied in a general way, as it is here, means belonging to the majority of people

Basically and physiologically, *sense* is the faculty by which things are *perceived*, physically or mentally. It has, of course, been widely used to mean good mental capacity, sound judgment and the like; but these latter significations are ruled out if, by *common*, we imply usual or frequent, for we know that such qualities are neither frequent or usual.

Coming down to brass tacks, then, common sense, according to our own perceptions of word values, should mean *the quality or degree of physical and mental perception possessed by the majority of human beings.*

It is really upon this basis—though unconsciously—that most people employ the expression. The majority of human beings see trees and grass as green; therefore, when the color-blind man declares that they are red or brown, his opinion is not in accord with the common sense. When Alexander Graham Bell declared that he had invented an apparatus, by means of which persons hundreds of miles apart could hear each other's voices, the merry villagers, wholly lacking in the faculty to perceive mentally the mechanism and connotations of his device, laughed uproariously and said, "It isn't common sense." And it *wasn't;* but, none the less, it was a *fact!*

Pasteur's bacteria and Lister's antisepsis were not common sense to the medical men of their time, any more than Columbus' scheme for reaching the Orient by sailing *west* was to the good but uninstructed people of Genoa, near the end of the fifteenth century, or the x-rays to the world in general near the end of the nineteenth. But they all proved to be true and valuable additions to human knowledge.

Today, the people who are doing research in various superphysical fields are making announcements which sound fantastic to the general run of newspaper readers, who turn up their noses at these "cranks" and "charlatans" and wither them with the contemptuous declaration, "It isn't common sense". Of course, it isn't! If it were, this world would be a happier and a better place to live in. These things may, however, for aught we now know, prove to be the most important factors in the lives of our grandchildren.

When we come to a just appreciation of what these words truly mean, we will not feel that we are paying a man a high compliment when we say, "He has common sense"; nor will we be sure that we have utterly disposed of an idea which is unfamiliar to us by denying, in effect, that its powers and possibilities can be readily perceived by the majority of human beings at this particular time.

Many people are dead from the ears up because they are dying by the hour. And when you die, you die from the top down.—Walter B. Pitkin.

Groups and Clinics

IT IS always interesting to watch words in the process of changing their meanings. One such transformation has been going on under our very eyes during the past ten or a dozen years.

The word, clinic, comes from the Greek κλινη (a bed) and the derived work κλινικη (bedside medicine), and, when most of us were students, meant just that.

The "Oxford Dictionary" (England) gives a couple of rather unusual meanings of the word, clinic, which will interest those who have a leaning toward philology: "A bed-ridden patient," and, "One who defers baptism until on his deathbed, because there is no atonement for sins committed after baptism."

Today, the generally accepted meaning of a clinic is a group of physicians who are practicing together, for the avowed purpose of reducing overhead expenses and giving better services to patients, perhaps for less money—and perhaps not. They may or may not have hospital (bed) facilities in connection with their institution.

Publication No. 8, of the Committee on the Costs of Medical Care,* deals with "Private Group Clinics" and contains some information which will, we believe, be of general interest.

Group Clinics are, with a few notable exceptions, a new thing in this country, having developed, almost entirely, since the War. There are now about 150 such groups in the United States, mostly in the Middle West, with a few in the Far West and South, and almost none in the East. The personnel of these clinics comprises about 2,000 physicians and dentists, most of them in groups of ten or less, but a few large groups bringing the average up to twelve.

The characteristics which make an association of physicians a "private group clinic" are: (1) They use an office suite and equipment in common, thus pooling the overhead expense; (2) the members (or most of them) are on a full-time basis; (3) most patients are handled by the group, rather than by one member; (4) the income is pooled and divided among the members on a contract basis, so that they have little or no financial dealing with the patients; (5) all financial and other non-medical matters are handled by a business manager, generally a capable layman; (6) they frequently own their plant and equipment as a corporation.

About thirty percent of the men in these clinics are internists; about twenty-three percent, surgeons; about thirteen percent, otolaryngologists and ophthalmologists; with ten or twelve other specialties represented by lesser percentages, obstetrics and urology being at the top of these.

Fees appear to be adjusted on much the same basis as that used by independent practitioners and average about the same size, but the adjusting is done by the business manager, after establishing the financial and credit status of the patient, instead of by the physicians. Some clinics have established standard fees for certain services, such as obstetric care, complete diagnostic studies and periodic health examinations.

The average *net* income of individual clinic members varies between $17,500 and $6,000, with an average of about $9,700.

As to the effect of group practice upon

*An abstract of this publicaton can probably be obtained, by those especially interested in it, by addressing the Committee at 910 Seventeenth St., N.W., Washington, D. C.

the relations between the individual physicians and their patients and between the group members and the independent practitioners, opinions vary. A decided majority of clinic physicians feel that their relations with patients are fully as strong and personal as they would be in a private practice and that the presence of their group in a community has not reacted unfavorably upon the other physicians. The independent practitioners are by no means so sure about these two points. Moreover, a majority of the clinic members feel that their services are more suitable for the management of difficult and complicated cases than they are for general practice, because the attentions of a clinic cannot so easily be adjusted to the convenience of a patient as can those of an independent practitioner.

There is a general feeling, both without and, especially, within the groups, that that type of practice gives the members more leisure and a larger opportunity for study, research and general individual cultural development.

These data are offered for the information of those who may want to know what this new development in medical practice is all about and how it is functioning, and especially for those who may be contemplating the formation of a private group or clinic.

Photo by G. B. L.

MAY
(Cinquain)

Small clouds
Race across blue,
Washed skies. The birds wake us
O' mornings. Earth is atiptoe
In May.

G. B. L.

LEADING ARTICLES

Obstructive Lesions of the Female Urethra*

By WINFIELD SCOTT PUGH, B.S., M.D., *New York City*

Chief of Clinic, Urologic Department, City Hospital; Commander, Medical Corps, U. S. Navy, retired; Medical Director, Steinberg Foundation.

STRICTURE of the female urethra was first described by Lisfranc in the year 1824; after which very little appears in the literature until the work of Civiale in 1850. This latter author carried out extensive urologic researches, and was the first to call attention to the response of the sympathetic nervous system to urethral lesions—an important factor in this disease. In 1875, Newman recognized the importance of stricture of the female urethra and advocated its treatment by electrolysis. Fissaux, in his essay of 1879, presents an interesting review.

Van de Warker in his first paper in 1887, and later in 1890, stated that all the great writers on gynecologic and urinary conditions seem to treat with silence a matter of great import; namely, that of stricture of the female urethra. His articles are forceful and to the point.

Skene, in 1887, called attention to the fact that stricture, while not common, occurs more frequently than we think, and often enough to require careful consideration. In the same year the question was taken up in a symposium by the London Obstetrical Society and a number of interesting cases reported. Otis, in 1892, said that stricture of the urethra, in women, may occur in sufficient extent to cause reflex troubles as varied and severe as that occasioned by urethral stricture in men, and this quite independent of any trauma. He also states that, where urinary conditions do not respond well to treatment, the patient's urethra should be explored by the urethrameter or the bulbous sound. Otis was well in advance of this period, his bulbous sound principle considerably antedating the excellent work of Hunner and others, with the olivary-tip catheters and wax points.

Abdominal surgery and its wonderful development, both gynecologic as well as urologic, with its splendid technic and excellent results, has apparently been responsible for our overlooking comparatively small things like the female urethra. Our attention has been drawn strongly toward the more spectacular things related to the uterus and adnexa or the kidneys and ureters. "Great oaks from little acorns grow," and the female urethra is responsible for more widespread suffering than many of us have realized. The remarks of Hunner, to the effect that, from recent observations, he felt that urologists were inclined to overlook urologic conditions in the female, are certainly most appropriate when applied to the urethra. This, however, need give little solace to the gynecologist, as we all seem to have strolled in the same path.

In a review of some of the late works on gynecology, notably such representative books as that of Graves, stricture of the urethra is dismissed in a few lines. Textbooks on urology in women, of such encyclopedic scope as those of Kelly and Bur-

*From a clinical lecture at the City Hospital, New York.

nam, furnished us with little of note; while such standard works on urology as that of Keyes mention it but briefly. In the larger work on modern urology, edited by Cabot, it is given a little more than usual consideration, by Osgood.

I believe we can summarize the history by saying that, aside from the pioneer work of Van de Warker and Otis, there seems to have been comparatively little research in this highly important field until the observations of Stevens and Hunner, during the past few years.

Incidence

In an examination of 3,000 gynecologic and urologic records, in this country and in Europe, I found five cases diagnosed as stricture of the female urethra. These were all cases that were readily diagnosed; one a carcinoma, one following an obstetric tear into the urethra and three cases of marked gonorrheal infiltration.

Wynne quotes Winckel as having found three cases in 3,000 gynecologic records. In his early essays and in his last textbooks, Winckel also states that it is rare. Meisel, of Budapest, found 378 strictures in the male to one in female. Pasteau collected 112 cases from the literature. Fischer records four cases in 4,000 records. Herman, in England, noted 60 cases. The similarity in the percentage reports in the larger series are very striking.

Osgood tells us that the urethra in the female is analgous to the membranous urethra in the male. Stricture of this portion of the urethra in the male (because of its squamous epithelium, which offers resistance to infection, and its absence of glandular structures in a continuation of the mucosa), is rare. This, Osgood further tells us, is the condition existing in the female urethra as well. Reasoning in this manner seems very sound, both from an anatomic and theoretic standpoint.

Hunner, in his contributions to the literature, speaks of narrowing of the urethra associated with ureteral lesions. In some of his case records of ureteral cases, notes of urethral infiltrations also occur. He is quoted by Stevens as finding 60 percent of those suffering with ureteral stricture to have urethral stenosis in addition. Bugbee states that he is surprised to find the extent to which stricture of the urethra exists in women.

Stevens, of San Francisco, believes that stricture of the female urethra is an important condition which has only recently been accorded real recognition, being constantly overlooked by both gynecologist and the urologist. In 169 urologic cases in women, he found urethral stricture in 90. This series is certainly worthy of our attention, as it emphasizes quite strikingly the frequency of the disease.

In an examination of 180 women presenting urologic symptoms, I have found urethral stricture in varying degrees in 35, and I believe we are justified in calling this common. Stevens makes a good point when he states that strictures of the female urethra are overlooked because we too readily accept the oftstated opinion that they are rare. If there is one point on which most writers, heretofore, seem to agree it is that stricture of the female urethra is rare.

Etiology

The causes of stricture of the female urethra given in the literature are many and varied. It will suffice to consider the more common factors.

Most of the older writers seem to cling rather strongly to the traumas incident to child birth, as most important, Winckel, notably, placing them above all other causes. Many cases of trauma, other than obstetric, are noted by such mid-European writers, as Stoeckel and Pleschner. Strictures following catheter injuries are noted by Teleky, Hoehne and others.

Tumors as direct causes are noted by Goldschmidt, Thompson, Kleinwachter., Teleky and Heinrichsdorf, although little detail is given as to the pathology of these growths. Caruncle and papilloma are, however, mentioned.

Herman speaks of lupus; Duncan of lupetic ulceration; Gallabin and Goldschmidt of syphilis; Routh of a stricture following parametritis; and Duncan of cirrhosis. Senile prolapse, vesico-vaginal fistula and congenital narrowing are also noted by European writers.

Skene, always practical, says that the causes are usually the same in women as in men; or, in other words, they are due to gonorrhea in the vast majority of cases; Graves notes gonorrhea and childbirth as causes; Kelly and Burnam, and also Osgood, mention gonorrhea, syphilis and tuberculosis as factors; Hunner believes in focal infections, but Stevens thinks they play no great part. I cannot see why, if focal infections are recognized as playing

a part in ureteral strictures, they should not be held responsible for urethral lesions, particularly when one considers the tissue structure of the two organs. Hunner seems to have proved his point, and some of Skene's cases also suggest focal infection.

In my own series of cases, the etiology was as follows:

Gonorrhea	24
Chancroid	2
Syphilis	1
Childbirth trauma	1
Keloid	1
Possible focal infection	5

This list shows a great preponderance of gonorrheal lesions and in my own mind I am fully convinced that it is the main factor in stricture of the female urethra. It is also possible that some of the cases listed as focal infections were gonorrheal, although this infection was vigorously denied by all.

Pathology

Our knowledge of the pathology of the female urethra, and particularly as applied to stricture, is not extensive. In view of my findings, gonorrhea plays an important part in the pathology, and a gonorrheal process is usually the first stage of the disease leading to stricture.

A stricture may be defined as an organic change in the wall of the canal, with a narrowing of its calibre and a diminution of its normal dilatability. The stricture formation usually begins on the floor of the urethra and at the point where the gonorrheal process has reached its greatest intensity. From what we can see with the cysto-urethroscope and note with the bulbous bougie, there are both soft and dense strictures. In fact, I believe we can go a little farther and apply here a classification similar to Oberlander's for infiltrations; namely, soft strictures and hard strictures, of the first, second and third degee.

In lesions following obstetric trauma, we have the pathology of the ordinary crushing type of injury. Ulcers and neoplasms here, such as carcinoma, sarcoma, papilloma, etc., differ in no way from their general characteristics as noted in other parts of the body.

Symptoms

A carefully taken history is most essential and everything in relation to the patient's previous condition must be clearly brought out. A history of venereal infection is often difficult to obtain, particularly in the better class of patients. The fact is, many may not know that they ever had it, as the ignorance of most people regarding venereal infections or sex matters is astounding. A history of "whites" or leucorrhea should always be looked on with suspicion. Many patients who have had venereal infections may lead us astray in our examination. Men, we know, frequently think they are deceiving us, even when we show them the gonococcus; women even more so.

Any history of childbirth injury or an operation following, such as repair of a urethro-vaginal fistula, should be noted. Obstetricians tell us that injuries which are apparently mild sometimes produce these conditions. A history of malignant disease or tuberculosis is important. The infectious diseases—scarlet fever, typhoid and pneumonia—as possible factors, are well worthy of attention. Localized foci of suppuration should also be noted. Do not overlook the local use of cauterants or strongly astringent vaginal douches.

Gynecologists tell us that the clinical history of such a case is not marked until the patient notes an increased difficulty in emptying the bladder, which difficulty may at times be extreme. One would naturally expect this to occur, but it by no means always does so. In fact, in most cases, frequency and dysuria are the symptoms most commonly complained of and, in several of my cases, the symptoms more strongly suggested abdominal and renal lesions than they did urethral damage. Many cases present remote symptoms and, if one is not careful, the patients may be classified as neurotics. The retention of urine, by women, for long periods is so common that they often seem to think it a natural condition. Far more do women complain of dribbling (really an incontinence of retention), than they do of obstructive symptoms. Slight obstruction, however, is often sufficient to produce a marked cystitis and urinary changes. Some writers tell us that symptoms of urethral stricture occur earlier in women than they do in men, and this is possibly true.

The symptoms of importance, in my series of cases, were: dysuria, urgency and frequency; signs of autointoxication were also common. In the advanced cases, actual obstruction symptoms were present.

The cases reported by Stanton, in which renal colic was associated with urethral

stricture in the female, are valuable, as they bring out the relationship of the urethra and the renal organs, through the sympathetic nervous system. This is a syndrome which has been but little noted before, but of which many of our patients complain, in a greater or less degree.

In view of what we have learned from these cases, we must not look for the classical textbook symptoms in urethral stricture in women, as it is unusual to find them. If, however, we take a careful history and find any suggestive urinary symptoms, we are justified in making a urethral examination. In fact, we should do it as a routine in all our female urologic cases, using for the purpose either the olive-tip bougie or the bulbs.

When we are able to use a small urethroscope, we find that it meets an obstruction and, on withdrawing it, we find the scar. Meltzer says that urethral infiltrations are commonly found on the floor, where the glands are most numerous. Hard infiltrations not only can be seen, but at times cause quite a tug on the instrument. In hard infiltrations the mucosa looks pale and, on withdrawing the instrument, the canal seems to have lost its elasticity and does not readily collapse. The urethroscope should always be used when it is possible to do so. The roentgen-rays, as a diagnostic medium, have not been satisfactory in this class of cases.

What Is a Stricture

Textbooks of anatomy state that the female urethra is from 2.5 to 3 cm. long and about 7.5 mm. in diameter, with a spindle-like dilatation in the center. Herman found that the urethras, in 56 patients between the ages of 18 and 70, varied between 7 and 12 mm. in diameter. Van de Warker believed that a urethra taking a bulb less than 16 F. was abnormal. Bugbee calls those cases in which there is difficulty in passing an 18 F. sound, strictures. Stevens says stricture above 18 F. will often cause symptoms, and thinks 26 F. is normal. In 114 of his patients, the urethral calibre averaged 22 F., and apparently they had lesions; his smallest was not above a filiform. None of my patients took above a number 18 F., and all had symptoms. I believe Bugbee is conservative and that a calibre of 22 F., as noted by Stevens, is at least narrowing.

The following table represents the urethral calibres in my series:

Filiform stricture	1
No. 8 F.	2
No. 12 F.	5
No. 14 F.	8
No. 16 F.	12
No. 18 F.	7
Total	35

It is true I have seen cases above a number 18 F. that were suggestive of stricture, but I have not been able, as yet, to fully convince myself on that point. Further investigation in this line may change my opinion, as it has regarding ureteral stenosis.

Location

The stricture may be situated in any portion of the urethra, or it may involve the entire canal. The anterior one-third, particularly at the meatus, is decidedly the most common situation. A series of cases collected by Wynne, shows 4 involving the entire urethra, 9 at the external meatus, 14 in the anterior third, 7 in the middle third, and 4 in the posterior third.

In my present series the lesions were located as follows:,

External meatus	18
Anterior third	12
Middle third	1
Posterior third	4

Diagnosis and Prognosis

The differential diagnosis presents no difficulties. Inspection, palpation, the use of the bulbous bougie or olive tip and the urethroscope should leave little in doubt. The etiologic factor is important and may be difficult to determine. The prognosis depends largely on the etiologic factor. Soft infiltrates usually respond well to treatment; while the hard infiltrations are always a source of doubt as to their ultimate cure.

Treatment

The female urethra is a delicate organ, very susceptible to injury, and must therefore be treated with care. Various authors have recommended gradual dilatation, modified rapid dilatation or rapid dilatation and electrolysis, in those cases where complete obstruction does not exist.

In the impassable strictures, internal and external urethrotomy have been recommended. If the stricture is found to be soft, as detected by the bulb, a careful, modified rapid dilatation may be done. This will, however, usually necessitate the use

of either a general anesthetic or of caudal anesthesia.

In case modified rapid dilatation is used I believe it is never advisable to dilate more than six points (as, for instance, from a six to twelve) at any one sitting. I once saw an operator use a small pair of forceps in an attempted rapid dilatation, with profuse hemorrhage resulting. Personally I should never recommend any rapid form of urethral dilatation. It is always best to begin the dilatation with the largest sound or bougie that will pass the stricture and then increase two numbers a week, until we reach the normal urethral calibre, which I believe is about 26 F. After this, the large dilator should be passed once a month for a year; and even after that it will be wise to have the patient come in every six months for a while, to see if there is any evidence of a return.

In the hard infiltrations, our treatment must be even more cautious than it is in the soft. While it is advisable to advance two numbers a week, if possible, we should go a little slower where the yielding of the tissues is less, as laceration readily occurs. Kelly has instructed some of his patients how to pass the sound, so that the treatment can be continued at home.

In cases of impassable strictures of the female urethra, and even in some of filiform caliber, it may be necessary to do a urethrotomy. If possible this should be an internal urethrotomy, somewhat as follows:

A filiform bougie should be passed and a Rand knife, with a fine blade, should be threaded over this. An attempt should then be made to cut through the stricture. After the urethrotomy, sounds should be passed, as in the larger strictures.

Osgood states that, in marked cases, it is necessary to do an external urethrotomy through the anterior vaginal wall. This operation should certainly be avoided if possible. Hoehne has reported a case of gonorrheal stricture in which it was necessary to resort to suprapubic cystotomy and retrograde catheterization.

In the treatment of those conditions due to tumor, radium or radical operation may be necessary. Kelly and Burnam also suggest the use of radium in dense strictures, but state that they have had no personal experience with it.

I have not discussed rapid dilatation and electrolysis, because the former is never to be used and the latter has little real value. A long experience with urethral lesions has taught me that simple remedies and extreme gentleness are always to be considered. This applies particularly to the female urethra.

The following records are those of representative cases:

Case Records

Case 1: Mrs. J. G., white, married, age 27, was brought to the hospital in an ambulance, complaining of pain over both kidney regions, most marked on the right, with inability to hold her urine.

Family history: Negative.

Previous personal history: She states that, aside from measles in childhood, she has always been well; denies any venereal disease, but states that two months ago she had a small sore near her urethra. She was very eager to get rid of this lesion and went to a dispensary for relief. The house officer gave her a black solution and told her how to apply it. The doctor said she was to return in a few days, if she was not better, and he would touch it up with carbolic acid. The sore did not improve, but instead of returning to the dispensary she obtained some carbolic acid and applied it rather vigorously herself. The sore became very much worse for a few days, and then cleared up by the use of a talcum preparation.

Present condition: The patient states that, about one month ago, she noticed a more frequent desire to urinate and that her urine was cloudy, with an unpleasant odor. She took some patent medicine without any relief. One week ago she noticed a tendency for her urine to dribble away and about this time began to experience a neuralgic condition over both kidneys but most noticeably on the right.

Examination reveals a small urethral orifice, surrounded by a scar, through which we were able to pass a No. 8 F. olivary-tip catheter which, on withdrawing, was grasped at the meatus. The bladder urine in this case was very cloudy and a large amount was at once expelled around the catheter. Following this a No. 10 F. olive point was passed, with the result that the patient felt very much relieved. Subsequently the urethra was dilated up to No. 26 F., at the rate of two numbers a week. There was a low-grade, hard infiltrate in this case, which extended a very short distance within the urethra. A small cystoscope later showed a cystitis, which soon cleared up with dilatation. Aside from a little pus, the urine showed no other evidence of importance. Her blood-chemistry was normal; kidneys and ureters were also normal. *End result*: *Cure*.

Case 2: Mrs. McG., white, age 36, married.

Family history: *Negative*.

Previous personal history: Scarlet fever in infancy; influenza two years ago; denies any venereal infection, but sometime ago (about five years), she had a severe attack of "the whites," that lasted about a year.

Present condition: Constant desire to pass urine, which at times is very urgent, but succeeds in passing a very little each time.

Examination shows a very small urethral orifice, through which a filiform bougie was passed with difficulty; but we were unable to pass anything else. The filiform was made fast and

allowed to remain over night and an attempt was made, the next morning, to pass other instruments, without success. We then threaded a Rand knife over the filiform and forced it through a very hard stricture, which seemed to extend almost a centimeter into the urethra. Following this we were able to pass a No. 8 olivary tip and she responded well to dilatation, but is still having a sound passed every two weeks. A well-marked cystitis was present in this case, which slowly responded to treatment. The kidneys, ureters and blood-chemistry were normal.

Case 3: Mrs. H. A. J., age 40, white, Italian.

Family history: Father died of unknown abdominal condition, at 53; mother of pulmonary tuberculosis, at 47; three sisters and one brother alive and apparently well.

Previous personal history: Has had rheumatism for years. History of profuse vaginal discharge three years ago.

Present complaint: Frequency, dysuria and at times urgency and dribbling of urine.

Examination revealed a chronic vaginitis and the urethra seemed to be surrounded with granulations, which apparently did not obstruct the orifice, as it readily admitted a urethroscopic tube, size No. 22, which, however, was stopped at about two centimeters by a hard obstruction. A distinct area of infiltration, surrounding almost the entire urethra, was seen at this point. A No. 8 urethral catheter was the largest I could get through into the bladder. This was left in place until the next day, when I passed a No. 10 catheter and, from this point on, the urethra was dilated two numbers a week, up to No. 26 F.

The urine in this case contained considerable pus and staphylococci and a well-marked cystitis was also present. The kidneys and ureters were later found normal. Cystourethroscopy showed the infiltrations around the deep urethra and bladder neck to be identical with those of the gonorrheal infections. The patient was discharged cured.

I believe that these cases are reported in sufficient detail to give a fairly good idea of what one may expect to encounter in the average run of cases.

Summary

1.—Stricture of the urethra, in women, is common.

2.—The principal cause is a gonococcus infection.

3.—The pathology is quite similar to that of urethral stricture in the male.

4.—Its most common location is at the external meatus.

5.—Most common symptoms are, frequency, urgency and dysuria.

6.—The diagnosis may always be established by using olivary-tip or bulbous bougies.

7.—The prognosis is good, in soft infiltrations; while that in hard infiltrations is doubtful.

8.—Treatment is best carried out by the use of very gentle dilatation. Operative procedures are always to be avoided if possible.

30 East 40 Street.

The Clinical Picture

What is spoken of as a "clinical picture" is not just a photograph of a man sick in bed; it is an impressionistic painting of the patient surrounded by his home, his work, his relations, his friends, his joys, sorrows, hopes, and fears.—Francis W. Peabody.

Examinations by Patients

The young physician beginning to build up his practice may think that the days of difficult and momentous examinations are over but he is wrong; the hardest ones lie ahead. Soon he is to be examined by his patients, not only as to his medical knowledge, but also as to his tact and his fitness as a man and a leader. I once knew a physician who "flunked" in an important case simply because his collar was torn back for a quarter of an inch on each side. The woman who gave him the "F" was apologetic about it; she was satisfied that he knew the technical side of his business but, as she told me afterward, she felt sure that a man who, in his position, could do such a foolish thing must have poor judgment in other matters.—Dr. Walter C. Alvarez, in "Nervous Indigestion."

Electrodiagnosis

By Richard Kovacs, M.D., *New York City*

Clinical Professor of Physical Therapy, Polyclinic Medical School and Hospital.

ELECTRODIAGNOSIS deals with the reaction of muscles and nerves to electrical stimuli. Its object is to amplify or to corroborate clinical findings or to afford the means of important differential diagnosis between organic (central and peripheral) and functional or hysterical cases of paralysis. It is an important help in prognosis and forms the basis for selecting the appropriate form of electrotherapy in peripheral nerve lesions and infantile paralysis.

The classic method of electrodiagnosis, the galvanic and faradic test, as established some eighty years ago by Duchenne, is a comparatively simple procedure and every practitioner of medicine who has occasion to treat nerve injuries and other lesions of the central and peripheral nervous system ought to be familiar with it. Unrecognized and unskillfully treated nerve injuries are responsible for permanent maiming following many industrial accidents, and therefore there ought to be no delay in the early recognition and appropriate treatment of such injuries. It is similarly important to recognize simulated cases of paralysis following accidents. A physician skilled in the simple method of electrodiagnosis can testify as an expert and, when necessary, demonstrate his findings in court.

The newer and more accurate methods of electrodiagnosis—the testing with condenser discharges and the determination of the chronaxia—require more complicated apparatus and greater skill and belong to the laboratory or to the high-type industrial clinic.

Principle of Electrical Testing

A suitable electrical stimulus, applied to a *motor nerve*, elicits a contraction in all of the muscles supplied by the nerve below the point of stimulation. A suitable electrical stimulus, applied to a *muscle*, elicits a contraction of the muscle itself and may also spread to the neighboring muscles. The character of the response varies with the nature and strength of the stimulus employed and the normal or pathologic state of the nerve or muscle. It may be normal; it may be exaggerated; it may be diminished or changed in character; and it may be entirely absent. Lack of any response to either muscle or nerve stimulation, proves that neither conductive nerve tissue nor contractive muscle tissue is present. This occurs only in the later stages of peripheral nerve injuries or poliomyelitis or of progressive muscular atrophy.

Motor Points

Every nerve and every muscle, unless deeply covered by other muscles, possesses a small area where it is most easily excitable and where a visible contraction can be elicited with a minimal amount of stimulation. This area is called the *motor point*. The motor point of a normal muscle is located usually about the middle of the muscle belly, where the motor nerve enters the muscle. In a nerve trunk, the motor point can be found where the position of the nerve is nearest to the skin and consequently its shape is somewhat linear; and there may be several points of maximal irritability in the long course of a nerve.

A set of diagrams showing the location of motor points is an indispensable part of the equipment of the beginner; those doing electrical testing frequently should learn, by practical experience, the approximate location of the motor points. It must be remembered, however, that even within normal limits there are individual differences in the location of the motor points and also in their sensitiveness. In pathologic conditions leading to a reaction of degeneration, the motor points in muscles are displaced distally, and at the same time the motor point of the nerve disappears entirely.

The Faradic and Galvanic Test

Equipment: (1) A source of constant (galvanic) current — a galvanic wallplate or a motor generator, equipped with a rheostat (for regulating the current) and a milliampere meter (for measuring the current);

(2) A movable faradic coil of moderate size (about twelve centimeters), activated by a source of constant current;

(3) A pair of conducting cords;

(4) Testing (active) electrode (a metal disk one inch in diameter, covered with gauze), mounted on a handle with an interrupting arrangement (make and break key);

(5) Dispersive electrode (a large, gauze-covered metal pad about three by five inches in size);

(6) Two-percent salt solution, for wetting the electrodes;

(7) A set of testing charts (Erb's diagrams), showing the location of the motor points.

Testing of Normal Muscles (Example, Biceps of Arm): Preparation: (a) Warm and moisten the flexor surface of the upper arm by a few minutes' exposure to luminous heat or by the application of a wet, hot towel;

(b) Place the arm in a relaxed position, by resting the elbow and forearm on a good-sized pillow;

(c) Apply the well-moistened dispersive electrode in good contact over the extensor surface of the arm; and the active electrode in good contact over the middle of the biceps.

1.—*The Faradic Test*: The two electrodes are connected to the two binding posts of the faradic coil (it makes no difference which post and which cord is used). Switch on the faradic current (you hear the humming of the vibrating armature and see a fine sparking at the point of contact), hold the key of the interrupting handle in "make" position (current flows steadily) and advance the secondary winding, from "O" position upward. The subject feels, at first, slight stinging under the testing electrode and, after sufficient advancing of the secondary winding (usually at two or three centimetres), a *tetanic contraction* of the biceps occurs. Breaking contact on the key stops the contraction at once.

2.—*The Test with Interrupted Galvanism*: Connect the active electrode to the negative pole of the galvanic supply (use green cord, according to custom), and the indifferent electrode to the positive pole (use red cord). Hold the key of the interrupting handle in "make" position, advancing the rheostat slowly and watching the current flow, as indicated by the milliampere meter. The subject feels a slight stinging under the active electrode, but, no matter how far the current strength is increased, *no contraction occurs while the current flows evenly.*

When the meter indicates a flow of about three milliamperes, break the current, and a brisk *single contraction* (not tetanus) of the biceps occurs. Repeat the test by trying the "make" of the galvanic current (advance the rheostat first and press down the key later). As a rule, *less* current is needed to produce contraction at "make". When more than three milliamperes is needed, in a normal muscle, at the "make" of the current, the testing electrode may be off the motor point. Remember also that, in applying both the faradic and galvanic test, there is a certain inertia of the muscle to overcome and, after a contraction or two is elicited, decidedly less current may be needed.

Testing Paralyzed Muscles: The technic is the same as in testing normal muscles. The first step is to warm and relax the muscles to be tested; The next is to gain an approximate idea of the active, voluntary muscular power present. Muscles capable of active contraction almost always respond to faradism. Testing of skin sensation will also give a lead, in case of mixed nerves, as to the actual nerve involvement (for instance, anesthesia is present over part of the deltoid area in case of paralysis of the circumflex nerve).

Electrical testing in paralysis also commences with the faradic test. Fully paralyzed muscles do not show any contraction under faradism. In case of doubt, the comparison with the unaffected side will serve as a guide. Do not attempt to use too strong a current, because of the painful skin sensation and contraction of the neighboring normal muscles by spreading of the current.

The test with interrupted galvanism in fully paralyzed muscles shows a sluggish, worm-like contraction, and the need of a much higher milliamperage than on the unaffected side. The formula of the full RD (reaction of degeneration), as applied to muscles, is: no response at all to faradism; sluggish response to galvanism; partial RD signifies a feeble response to faradism and sluggish response to galvanism; absolute RD signifies total lack of response to any electric stimulation. It takes about ten days after an injury or disease for the RD to develop; the muscle ceases to respond to faradism between the fourth and seventh day and sluggish galvanic response becomes evident about the tenth day.

Why two Currents are Necessary for Testing: The fact that two kinds of current are used for testing is somewhat be-

wildering to the beginner. The faradic current furnishes a series of rapidly recurring stimuli, each rising to a maximum in about 1/1000 of a second and recurring about 100 times in a second. The rapid recurrence of these stimuli keeps a normal muscle in tetanic contraction during the entire time of flow, thus making observation of the response very easy. The galvanic current, while flowing steadily, furnishes no stimulus for muscular contraction; only when its flow is suddenly started (made) at sufficient strength, or is interrupted (broken) while flowing at sufficient strength, does a muscular response occur. These contractions are single contractions, and it has been estimated that the impulse of the make and break of the galvanic current lasts about 1/2 second. We have thus, for ordinary testing, a stimulus of very brief duration (the faradic current) and one of relatively long duration (the "make" of the galvanic current). Normal muscle and nerve respond to both of these equally well, but once the nerve supply is damaged the muscle will not respond to the brief faradic stimulus, but still responds to the longer impulse of the galvanic current.

Significance of the Reaction of Degeneration

The importance of the RD in the prognosis lies in the fact that, when present ten days after an injury or disease, it indicates changes in nerve and muscle substance which will take considerable time—several months at least—to recover. *The finding of an RD by no means indicates irreparable damage.* If present in a case of penetrating injury, with other clinical evidences of nerve division, it indicates the necessity for surgical interference, followed by many months of appropriate physical therapy.

If there is no clinical evidence of division or tearing of a nerve, the appearance of RD, following trauma or disease, indicates a degenerative change in the molecular structure of the nerve trunk, which will take a longer time to repair than if actually torn. Regeneration by the descent of new axis cylinders from the intact central end takes place at a rate of one or two millimetres a day; therefore, the average time of restoration is, for every inch of the affected area, a little less than a month. (Fine nerve endings to small intrinsic muscles never regenerate, in some instances, in spite of immediate suture and the best of treatment.)

If, ten days after an injury accompanied by paralysis, there is no RD present, the diagnosis is "contusion" of the nerve, with only temporary disturbance of nerve conduction, and a prognosis of an early recovery can be made. The same significance prevails in cases of facial paralysis with no RD present, as compared with facial paralysis with RD, due to compression or severe degeneration of the nerve.

The occurrence of the RD proves a lesion of the lower motor neuron of the nervous system, consisting of the anterior horn cell, anterior root and nerve plexuses, and peripheral nerve. Clinically, such a lesion is always accompanied by *flaccid paralysis* and loss of tendon reflexes.

Functional, hysterical paralysis and paralysis of cerebral origin or resulting from lesions of the pyramidal tract (upper motor neuron), are never accompanied by important disturbances of the electrical reactions. At most there is slight electric hyperexcitability, while in the later stages there is usually hypoexcitability, from muscular disease. Clinically, these cases are always accompanied by *spastic paralysis*, increased reflexes, lack of sensory changes and lack of muscle wasting.

Electric muscle and nerve tests in spastic paralysis, therefore, are of no special diagnostic value. In hysterical and other functional paralyses, however, the normal electric reactions, together with the sensory and motor changes, which in no way correspond to any form of nerve distribution, form a most important diagnostic evidence. Absolute RD signifies a total lack of response to any electrical stimulation of the muscle. Prognosis for recovery is hopeless in this case. Before rendering this verdict, one always has to consider that skin resistance, much edema of the tissues, or spreading of the galvanic current to neighboring muscles might, at times, temporarily prevent a response to interrupted galvanism; therefore, in any doubtful case, repeated and careful examination is required.

The prognosis based on correct electrical testing is of especial value in the rather frequent types of paralysis, such as facial paralysis following exposure or "idiopathic" cause; in paralysis of extremities due to pressure or exposure (wrist drop after sleeping with the arm under the head); and in many types of infantile paralysis. In these conditions, when tested about ten days after their onset, we are able to differentiate light, moderately severe and severe cases

When there is no RD, there is usually recovery in two to four weeks; if partial RD is present, recovery may take six to twelve months.

In organic spinal affections, as well as in peripheral neuritis due to intoxications, no definite prognosis can be made on the basis of partial or even full RD alone, because it may represent only a transitional stage in an otherwise progressive and incurable condition.

Illustrative Cases

Case 1: Injury of left deep peroneal nerve; contusion; full recovery. C. T., letter carrier, slipped from a step two months ago and strained his left foot; slipped again seven weeks later, and since last injury has moderate drop foot, with diminished sensation in the foot. Nerve and muscle test, taken eight days after last injury, shows partial RD in deep peroneal distribution (tibialis anterior and extensors). The patient received whirlpool baths to the left foot, followed by slow sinusoidal treatments to the affected muscles. Four weeks later the nerve test showed normal response; and two and a half months after the injury, the patient had fully recovered power in his leg.

Case 2: Injury of right musculospiral nerve; contusion; full recovery. B. G., a clerk, admitted June 29, fell five days before, with the right wrist doubling beneath his body; immediately he could not extend his wrist. Complete wrist drop was present and flaccidity of the extensor muscles of the right forearm, with some anesthesia over the dorsal aspect of the right forearm. Nerve test, on July 5, showed normal response of all muscles. A spade splint was applied, with wrist and fingers in full extension. Luminous heat, Bristow coil, and massage to the extensors were ordered. Two weeks later the patient showed returning power, and active and passive exercises were added. By August 15 (six weeks after injury) the patient had fully recovered.

Case 3: Injury of right circumflex; compression; full RD; recovery. F. F., a man aged forty-two, suffered a subglenoid dislocation of the right humerus, December 15, which was promptly reduced and the shoulder immobilized for two weeks. By February 21 the patient still had marked limitation in abduction, flexion and extension of the shoulder, in spite of active physical therapy, consisting of luminous heat, massage and mechanotherapy. He was suspected of being a malingerer, but electrical testing showed full RD of the right deltoid muscle. Interrupted galvanism and, later, interrupted sinusoidal were added to the treatment, and the shoulder was held in abduction by an airplane splint; steady improvement followed, and by June 30 evidence of active power was present in the deltoid; by November 12, normal electric reaction returned and the patient resumed work as a pianist.

Conclusions

Testing for the reaction of degeneration almost always permits the rendering of an accurate verdict, from the standpoint of diagnosis, prognosis and therapy, in any case of paralysis following injury or disease.

It requires only a simple and inexpensive apparatus—a galvanic and faradic outfit—and enables the skilled physician to testify as an expert in cases of paralysis and pseudoparalysis, in industrial injuries and other accident claims.

In using the electrical reactions of nerves and muscles in diagnosis, however, one must bear in mind that these tests are only part of the evidence, the other part being supplied by careful clinical examination of the muscular power, the reflexes, and of the sensory condition of the region affected.

1100 Park Avenue.

Life Is More Than Physics and Chemistry

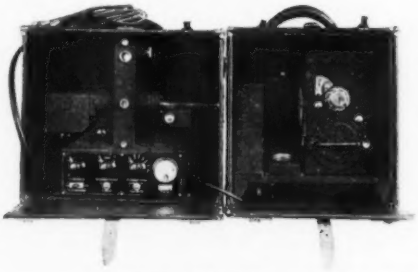
I am not intending to tell you today—you have heard it often enough and it is not true—that the phenomena of life could be explained, at least by some one clever enough, in terms of the physics and chemistry of the present time.

Whether the future physics and the future chemistry will suffice I will not guess. When the events of physics have become indeterminate, and the physicists have become poets and mystics; when chemistry has become physics, and the chemists have become physiologists; then, indeed, the situation may be different. Until that day I shall continue, with Haldane, to insist that, in the organism regarded as a whole, we have a phenomenon of a different kind, one whose unity and fundamental nature are as essential as any of the concepts of physics.—A. V. Hill, M.A., Sc.D., O.B.E., F.R.S., LL.D., *London, England.*

Notes from the College of Physicians

Reported by GEORGE B. LAKE, M.D., *Chicago*

WHEN one who is really eager to gain medical information is turned loose in a clinical center like Baltimore (as happened during the fifteenth annual clinical session of the American College of Physicians, from March 23 to 27, inclusive), one yearns to be triplets or something, so as to overcome the disability of being in only one place at the same time. The various afternoon programs were so fascinating that it was difficult to choose just one for each day.



Courtesy, Sanborn Co., Cambridge, Mass.

Sanborn Portocardiograf.

Then, too, the regular meeting was followed by a day in Washington, to give the attendants from a distance a chance to see the National Capitol and study the great scientific and clinical centers developed there by the Army, the Navy, the Public Health Service, the Smithsonian Institution, etc.

The technical and commercial exhibit does not, of course, compare in size and variety with that of the A. M. A. meeting, but it is a rather new thing for the College and is growing in importance every year. Practically all of the important medical publishers were showing their lines of new and permanently valuable books; several pharmaceutical houses were explaining their most recent offerings; instruments adapted to the use of internists—especially the new Sanborn portable electrocardiograph, which was shown for the first time and sells at a moderate price—were on display; and purveyors of special foods were making their wares known to all and sundry.

The Alcazar, where the meeting was held, was not especially well adapted to the purpose and things were decidedly crowded in spots; but the amplifiers in the auditorium were well adjusted, so that even those who scarcely looked up from the papers they were reading—and that included too many of the speakers—could be heard reasonably well. A new departure for this organization consisted of devoting one entire session to the consideration of matters of public health and medical economics.

The group that gathers at the meetings of the College is particularly choice, consisting largely of key-men from various communities, many of whom have national reputations, so the personal contacts made are of an especially stimulating and helpful character.

The registrations at the session numbered about 1,800, and at the business meeting, on Thursday, Dr. F. M. Pottenger, of Monrovia, Calif., was chosen as president-elect, Dr. S. Marx White, of Minneapolis, assumed the chair for the current year, and San Francisco was selected as the meeting place for next year. That will be the first time the College has met west of the Mississippi River.

Here follow abstracts of a number of the papers read at the formal sessions and at the various clinical conferences at hospitals in Baltimore and Washington .

RHEUMATIC FEVER A HEART DISEASE

By Warfield T. Longcope, M.D., F.A.C.P., Baltimore, Md.

Ninety-five percent of patients with rheumatic fever have *demonstrable* cardiac disease, either old (50 percent) or recent. In fact, *rheumatic fever is a disease of the heart* and would be recognized more often than it is, if its essentially cardiac nature were generally accepted, and the fact that arthritis is a strictly secondary manifesta-

tion, occurring in only about 60 percent of the cases, while chorea in the history is not rare.

Heart disease is relatively rare in all other types of arthritis; while rheumatic fever results in endocarditis, myocarditis and frequently pericarditis, causing chronic invalidism and death. Of 142 cases of this latter malady, 22 percent died, nearly all of them from cardiac conditions.

ENDOCARDITIS

By William S. Thayer, M.D., F.A.C.P., Baltimore, Md.

Cardiac disease is the most *important*, if not the most prominent, feature of rheumatic fever. In these cases, the endocarditis is sometimes of less importance than the damage to the heart muscle or the pericardium.

Sometimes the rheumatic condition is severe and rapid; often it is atypical and insidious. It is a disease of childhood and adolescence, most of the deaths occurring before the age of twenty years. Petechiae are rare and anemia moderate. Albuminuria is common, at the height of the disease, and so is serous and fibrinous pericarditis. Rheumatic carditis is never suppurative.

Of the valvular involvements, those of the mitral valve are vastly the most common and those of the aortic come second. The tricuspid valve is rarely damaged *alone*, and then but slightly. Pulmonic lesions are very rare.

Rheumatic heart disease leads to death from *myocardial* failure; as distinguished from infective endocarditis, in which the lesions are superficial.

The more acute forms of bacterial endocarditis are not difficult to distinguish from rheumatic heart disease. In only 25 percent of the former cases is death due to myocarditis. In infective cases, the blood cultures are generally positive for *Streptococcus viridans;* while such findings are decidedly rare in rheumatic carditis.

CHRONIC MYOCARDIAL INSUFFICIENCY

By Henry A. Christian, M.D., F.A.C.P., Boston, Mass.

In a clinic for adult patients, heart disease without valvular lesions is more common than with them.

Rheumatic heart disease is a malady of young people and causes death within twenty years of its beginning. Syphilis is also more common in early adult life and causes, chiefly, aortic insufficiency.

In patients over forty years old, who are neither rheumatic nor syphilitic, most cardiac cases are myocardial and non-inflammatory. The heart is large and inefficient. Hypertension is not an important factor, merely increasing the work of the heart and precipitating symptoms.

Focal infections, in these cases, are largely imaginary, and their removal does not benefit the patients materially. Dietary fads are bunk.

In these cases of myocardial insufficiency, the *mental and physical* activities of each patient must be adjusted to fit the degree of his individual cardiac inefficiency, no matter whether symptoms of failure are severe or not. The administration of digitalis should be started when cardiac failure *begins*, not after it is well advanced.

RHEUMATOID ARTHRITIS

By Russell L. Cecil, M.D., New York City

Sixty-five percent of cases of rheumatoid arthritis show positive cultures of a streptococcus, midway between the hemolytic and green-producing varieties, in the blood and joint fluids, and also agglutinins of high titer in the serum.

The culture media for this work must be very carefully prepared, and the cultures must be studied for *three or four weeks*, under constant incubation.

Vaccine therapy has probably been abused, more or less, but is of value in many conditions. In these cases it is decidedly useful. The causative organisms should be killed by formalin and the vaccine given hypodermically or intravenously. It is probable that the effects of this important therapeutic agent are, in part, nonspecific.

EARLY DIAGNOSIS OF GASTRO-INTESTINAL NEOPLASMS

By Thomas R. Brown, M.D., F.A.C.P, Baltimore, Md.

Cancer of the esophagus shows early symptoms, develops early and metastasizes late. Its cure is awaiting only the perfection of a surgical technic, which will probably come in the near future. So far, all esophagectomies, in human beings, have been followed by death from mediastinal infection.

In cancer of the lesser curvature of the stomach, the symptoms are slight and in-

definite—loss of appetite, slight weakness, slight nausea, decrease in gastric acidity and occult blood in the stools. Treatment, to be successful, must be given early and should always be surgical. Operability must be determined, individually, in every case, as some neoplasms metastasize early and others late.

A carefully-taken *history* is the most important factor in diagnosing gastrointestinal cancer, with a physical examination and laboratory tests to complete the clinical picture.

Surgery is the only treatment which should be given consideration in these cases; and a laparotomy should be performed as soon as there is a *sound suspicion* of gastrointestinal cancer.

SKIN TESTS IN ALLERGY

By Harry L. Alexander, M.D., St. Louis, Mo.

Allergy is a *localized* process. The bronchi or the gastrointestinal tract may be sensitive, and the skin not at all or very slightly so. In hay-fever, 95 percent of skin tests give positive reactions; but in gastrointestinal allergy, only 26 percent of cases give positive skin tests.

The response to skin tests varies at different times and on different areas of the body surface. We may obtain positive skin reactions with no clinical symptoms to back them up. Skin testing is discouraging. It is satisfactory if the results are positive, but means nothing if they are negative. Infants, if sensitive, are extremely reactive to allergens.

In skin testing, there is no necessity for the formidable lists of allergens used by some workers. Twenty-five foods, hair, feathers, orris root and a few pollens are all that need be used.

PROTEINS IN NEPHRITIS

By Williams S. McCann, M.D., F.A.C.P., Rochester, N. Y.

In nephritis,, the question of protein metabolism is very complex, and so much attention has been given to the bad effects of certain end-products of protein catabolism, that the importance of protein *anabolism* has been overlooked. Many nephritic patients are seriously undernourished because of protein starvation. The *endogenous* protein metabolism goes on, whatever the diet may be.

For normal protein metabolism, one must ingest those foods which contain *all* of the amino-acids which are needed for building up the *human* proteins. Many of the vegetable proteins do not meet this condition.

In acute hemorrhagic nephritis, we must remember that toxic destruction of the body proteins has taken place during the antecedent infectious process, and that carbohydrates and fats can spare the body proteins.

Protein starvation depletes the proteins in the blood serum and causes edema, especially if the serum-albumins have been unduly lowered. It is, therefore, important that the protein metabolism of every nephritic patient should be studied carefully, so that his diet may be intelligently adjusted to his individual requirements, instead of reducing the protein intake as a matter of routine.

THE INSULIN COEFFICIENT

By John R. Williams, M.D., F.A.C.P., Rochester, N. Y.

The glucose content of the diet, minus the glucose content of the urine, equals the glucose utilized in the body.

The chief action of insulin is to form glycogen from glucose, and for estimating this power we may assume that one unit of insulin will burn 4 Gm. of glucose.

The amount of insulin the body can produce in 24 hours is the patient's insulin coefficient.

Example:

Amount of glucose eaten.....160 Gm.
Amount of glucose in urine..... 40 Gm.

Glucose utilized.....120 Gm.

$\frac{120}{4} = 30$ units of insulin produced.

For the purpose of estimating the severity of a case of diabetes, we may utilize this table:

Stage of Disease	Insulin Coefficient
Normal Person	100+
Borderline Diabetes	75
Mild Diabetes	40 to 75
Moderately Severe Diabetes	25 to 40
Severe Diabetes	25 –

A sharp and sudden fall in the insulin coefficient may be due to failure of the body to burn stored glycogen or to an *infection*, obvious or concealed.

A study of the insulin coefficient gives

much valuable information and may profitably be used as a guide to therapy with insulin or diet or both.

PSYCHOLOGIC FACTORS IN MEDICAL PRACTICE

By William V. Silverberg, M.D.
Baltimore, Md.

Not all psychiatrists now look for physical causes for all psychoses. The gross materialists can not, it is true, become interested in purely psychic cases; but the same is not true of those who are dealing primarily with the *mind* as a definite organ of man.

In alcoholic psychoses, for example, the cause is *more than merely the ingestion of alcohol*, and the results are varied and *personal*, although the actual, objective changes in the *brain* are the same in all cases.

Disease is not an accident. Exposure to an infection may be accidental, but the patient's *resistance* to infective processes is due to predicable, internal causes, bound up with *personality factors.* These psychic factors are relevant, *even to obvious physical appearances.*

The true physician sees beyond localizing symptoms, in any field.

INCIPIENT SCHIZOPHRENIA

By Harry S. Sullivan, M.D.,
New York City

"Functional" mental disorders are common in general practice and arise chiefly in the field of cooperation with other people and in dealing with the conventions of society; that is, the precipitating factors are in the environment, rather than in the individual.

"Primitive genital phobia" is one of the almost universal inhibitions. Children are *taught* to keep their hands off their genital organs and not even to *speak* of them, until it becomes "second nature" to them. But they do not cease to *think* about those organs.

If the training given in infancy and childhood is wrong, a psychopathic personality may be developed. The child has no more than a verbal picture of his own reality, and none whatever of that of other people.

Most children are *overprotected*, physically and mentally, and are not taught, or even permitted to cooperate with other people. In spite of all this, the coming of puberty brings biologic demands which must be satisfied *somehow*, but lacking social facility and adjustments, the adolescent develops a psychic disorder which, in the more severe cases, becomes frank schizophrenia and ends in suicide or a psychopathic hospital.

The popular ideas of dementia precox are spread by *contagion.* The psychically maladjusted adolescents and young adults frequently possess special skills and a high degree of intelligence. In fact, *mental defectives do not develop schizophrenia.*

People possessing precox personalities are far more numerous than are frank schizophrenics; and these individuals will blow up under the pressure of a stressful situation.

It is difficult to establish real contact with a schizophrenic, because he has astonishing sensory disorders and is set in his delusions and hallucinations but, if contact *can* be established, the outlook is hopeful.

These patients have everything the matter with them except a mental malady. They go to a physician and he says, "What is troubling you?" Then, because it is considered disgraceful to be *different* from other people, while physical diseases are respectable, the patient will dig up a line of physical symptoms which will throw most doctors entirely off the track.

The mind is concerned with self-esteem and relations with other people, and is popularly supposed to reside in the brain. Therefore, when the schizophrenic finds himself uncomfortable in the presence of others, his self-esteem suffers but he says nothing about that (probably he does not know), and complains of physical symptoms about the head—headache, eye, ear and speech disorders and the like. Again, the unsatisfied sex urge causes urogenital symptoms, but the taboos associated with these functions necessitate a shifting of the location of the acknowledged symptoms to the alimentary tract (often the rectum) and other abdominal organs.

"*Effort Syndrome*" is abnormal circulatory irritability and failure and is shown by acrocyanosis, pallor, etc. One *consistent* physical sign in this condition is the fact that *the rate and depth of respiration vary greatly* and there is a slight lowering of the basal metabolic rate.

The sincere physician, who is not a mere diagnostician, finds these patients *hard to talk to.* Their complaints are *not clearly stated* and the people in their environment have no real personality and are described in completely conventional and stereotyped

phrases. They will put up a noble front, but, if convinced that they are not deceiving the physician, they will tell the facts which have been deliberately concealed. If the doctor understands and treats the illness frankly, the patient will not blow up entirely.

Do not try to be God! Most of our ideas of right and wrong are based on superstitions. When a contact is made, do not help the patient in his own camouflage. Do not tell him what *you think* about the masturbation which he confesses. That is not the real trouble. *Life* is the trouble! Give him a *hearing* and keep his confidence.

Much time must be spent with these patients, *frequently*. The busy internist or practitioner cannot give this time regularly; but he should know when there is *no physical disorder* and where to refer the case.

Groups and camps, for the development of personality and the social growth of the patients, are vastly helpful in these cases; but for their proper management we need to develop a new type of physicians.

PHYSICIANS AND THE PUBLIC

By George E. Follansbee, M.D., Cleveland, O.
Chairman, Judicial Council, Am. Med. Assn.

Neither the public nor the medical profession understands the viewpoint of the other.

There is a popular impression that the general practitioner is not fit to take the responsibility for the actual treatment of patients. Only the specialists are supposed to be able to do this, the practitioners acting merely as distributors of patients to the supposedly more competent men in the special fields.

The standards of specialization should be made much more stringent than they now are, and *real* specialists should support the general practitioner and encourage patients to employ his services in most cases.

The people themselves are responsible for much of the present excessive costs of medical care. They insist upon selecting for themselves, specialists whose fees must, of necessity, be high; and they demand laboratory procedures and specialized services which are wholly unnecessary. We should be educating them as to the folly of such a course of action.

The present medical graduate, after serving as an intern and a resident, is perfectly able to perform many operations which were formerly in the field of the surgical specialist. These operations are now, by reason of modern methods and training, essentially minor procedures, and should be done by practitioners and charged for accordingly.

The high cost of having babies, about which many complain, is due to the fact that the parents insist upon calling for the services of specialists, for mother and child, when there is no necessity for such services.

PHYSICIANS AND PUBLIC HEALTH

By Felix J. Underwood, M.D., F.A.C.P., Jackson, Miss.
President, Southern Medical Association

There is now a mass of information and detailed technic in connection with public health and preventive medicine, just as valid and important as that on any of the subjects regularly taught in the medical schools.

The first duty of health officers is to educate *physicians* along these lines; and if this is done diplomatically, the cordial cooperation of the medical profession can be enlisted.

The public is frequently more thoroughly "sold" on a health program than are the physicians; and, if the latter obstruct the progress of preventive medicine, the people will distrust the profession, try to take matters into their own hands and demand State Medicine.

Preventive medicine will, from now on, occupy more and more of the time of practitioners, who should be *leaders* in this field. To assume such leadership successfully requires special training.

SOMATIC DISORDERS OF PSYCHIC ORIGIN

By S. Katzenelbogen, M.D., Baltimore, Md.

Somatic disorders, such, for example, as an excess of hydrochloric acid in the stomach, may be caused by physical or by psychic factors. Pain may be of strictly psychogenic origin and is, in fact, rather frequently associated with circulatory disturbances of the socalled functional or psychic type, such as "effort syndrome." Pathologic fatigue, with dizziness, "shakiness," wandering attention and other subjective symptoms, also falls in this class of cases.

An oversolicitous physician or one lacking appreciation of the condition and having a tendency to unwise frankness in dis-

cussing maladies with patients, may start or keep up such neurotic disorders.

Anger, fear and other acute emotions, particularly those of a negative or destructive character, can wholly or partially inhibit the secretions and the movements of the gastrointestinal tract; or can increase them, especially the movements.

Strong emotions, by affecting the autonomic nervous system, may *sensitize* it, so that, thereafter, it will react to milder stimuli. "Sympatheticotonia" and "vagotonia" do not, by any means, cover the conditions completely.

Functional disorders are not imaginary. They may be provoked by physical or by psychic factors. The psychic situation of the patient should be examined as carefully as his physical condition.

PSYCHOLEPSY

By W. S. Muncie, M.D., Baltimore, Md.

Psycholepsy means a sudden "seizure" or psychologic event having somatic repercussions, possessing great vividness in the consciousness of the patient and usually associated with the head—"snapping," "something breaking in the head," "a sharp instrument driven into the brain," "a bolt of fire," etc.—and causing him to be very hopeless of recovery. These attacks are followed by confusion for some time, and later by depression, timidity, fear and other incapacitating symptoms. *Depersonalization* (a sense of the unreality of his life and environment) is a marked feature of those cases which begin with a psycholeptic episode.

Before a psycholeptic attack there is a more or less prolonged period of progressive increase in *psychic tension*, from worry, remorse, etc., but the patient makes no effort to change the circumstances which are causing the tension.

These attacks come on in psychopathic, introverted personalities who are disinclined to ask help from others. Sex factors are common. The psycholeptic episode is a sort of "anti-conversion" experience, which steps the patient's psychic or spiritual status *down*, instead of up.

No patient of this type has been able, without help, to gain any insight into the nature of his disorder; and it is difficult for him to do so, even *with* help.

In treatment, we must convince the patient that his attack was the culmination of a long series of psychic strains and disorders, and not a sudden and supernatural event.

THE PARATHYROIDS AND CALCIUM METABOLISM

By David P. Barr, M.D., F.A.C.P., St. Louis, Mo.

Parathormone can relieve the tetany following the operative removal of the parathyroid glands and normalize the calcium metabolism. Overdoses can produce severe symptoms of hypercalcemia, even to destruction of the bones.

Von Recklinghausen's disease of the bones appears to be due to hyperparathyroidism, and is relieved by the operative removal of these glands, if they are subject to a tumorous growth, or even of one or two apparently normal glands.

Multiple myeloma looks like hyperparathyroidism. The serum-calcium is increased; the bones are attacked (decalcified); and metastatic deposits of calcium, or even of bone, appear in various organs.

In rickets and osteomalacia there is hyperplasia of the parathyroid glands, but this is not sufficient to balance the other factors. The serum-calcium is a fairly accurate index of parathyroid activity.

Viosterol produces results similar to those of parathormone. Overdoses* cause decalcification of the bones, hypercalcemia and calcic or bony metastases. It may replace vitamin D or stimulate the parathyroids.

CORTIN (THE ADRENAL CORTEX HORMONE)

By Frank A. Hartman, M.D., Buffalo, N.Y.

A preparation of the adrenal cortex is now available which contains less than 1:100,000 parts of adrenalin and can be injected intravenously without untoward results. It acts in a few minutes, when given intraperitoneally, and more slowly when injected hypodermically. With it, adrenalectomized animals have been kept alive and in a practically normal condition for 150 days. One adrenalectomized cat became pregnant and gave birth to a litter of healthy kittens while receiving cortin.

One human patient suffering from Addison's disease was collapsed and comatose, with a blood pressure of 50/20, when the administration of cortin was begun. He was given the equivalent of 2,500 Gm. of

*The dangerous dose of viosterol is many times larger than the therapeutic dose.—Ed.

adrenal cortex during the first two days of treatment, and then 500 Gm. daily.

Within twenty-four hours, this patient was conscious and eating, and within a few days he was sitting up, with a blood pressure of 85/50, but relapsed when the dose was decreased. He required the equivalent of 1,000 to 1,300 Gm. of adrenal cortex daily, divided into four doses, which were given six hours apart. The skin pigmentation did not diminish.

This patient finally died of pneumonia, and the autopsy showed an almost complete absence of adrenal cortex; but *areas of beginning regeneration were present.*

There are minor degrees of adrenal insufficiency which are definitely *not* Addison's disease. In these cases the administration of cortin results in a marked increase in the ability to do work without fatigue and in the sense of well-being. Such a result permits a definite diagnosis of minor adrenal insufficiency.

Cortin is useful in the asthenias following certain infections, such as diphtheria and scarlatina. Excessive doses produce no untoward symptoms in animals.

DIABETES INSIPIDUS

By Thomas B. Futcher, M.D., F.A.C.P., Baltimore, Md.

Some mechanism, not yet fully understood, controls the water metabolism of the human body. In diabetes insipidus, this mechanism is disturbed.

There are three theories as to the location of the lesion in this disease. It may be: (1) in the posterior pituitary; (2) in the hypothalamus; or (3) in the *tractus peropticus.*

The pituitary body has three lobes. The anterior lobe is glandular and the posterior lobe has four functions; pressor, oxytocic, diuretic and antidiuretic. In six percent of pituitary tumors, the antemortem diagnosis was diabetes insipidus. A similar diagnosis has frequently been made in cases of trauma of the sella turcica and in metastasis of carcinoma into the posterior pituitary.

Puncture of the hypothalamus also causes rather permanent polyuria and adiposogenital dystrophy. Damage to the tuber cinereum is involved in polyuria. There are tracts of nerve fibers in the hypothalamus, running from the nucleus peropticus, in the floor of the third ventricle, through the tuber cinereum into the posterior pituitary, and surrounding islands of cells which appear to be glandular in nature.

The nucleus peropticus, the hypothalamus and the posterior pituitary are all hooked up together; but the fact that a silver clip, placed on the stalk of the pituitary, will cause symptoms of diabetes insipidus, indicates that the etiologic lesion is in one of the higher centers.

Treatment: If syphilis is present, it should be treated. A tumor in the base of the brain should be removed, if practicable. The most generally useful treatment is the administration of posterior lobe extract (surgical pituitrin) every six hours, either hypodermically or applied to the nasal mucous membrane by means of a spray or on cotton tampons. The results are best if the lesion is in the posterior pituitary lobe or in its stalk.

THE TREATMENT OF OBESITY

By Frank A. Evans, M.D., F.A.C.P., Pittsburgh, Pa.

The only safe and satisfactory way to reduce obesity is by burning the excess fat *without causing undue strain on the body.* This can be accomplished by reducing the intake. Thyroid extracts cause strain.

If the diet is properly balanced, its caloric value can be reduced to a very low figure (400 to 600 calories) without danger of acidosis or other untoward symptoms. For each kilogram of *ideal* weight for the patient (considering height and age), the diet should contain 1 Gm. of protein and 0.6 Gm. of carbohydrate. Fat should be omitted entirely, except that which unavoidably enters into the cooking of the food, amounting to from 10 to 25 Gm. a day.

The use of thyroid preparations is rarely indicated (about 2 percent of patients) and should be controlled by frequent basal metabolism tests. The only indication for it is a B.M. rate which is low for the *ideal* weight of the patient—*not* for his *present* weight. A low rate for a man weighing 200 pounds might be high for a weight of 150 pounds. Remember that it takes more food to satiate a person with a high B.M. rate than it does for one with a lower rate.

A group of 187 patients has been treated, by diet alone, for an average period of 8.7 weeks, with an average weight loss of 30.5 pounds (3.5 pounds a week). The loss of weight was most rapid during the first four

weeks; hunger disappeared in a few days; the patients felt better and showed increased resistance to fatigue.

DIET FACTOR IN THE ANEMIAS

By Richard A. Kern, M.D., Philadelphia, and C. S. Keefer, M.D., Boston

Pernicious anemia is due to an *intrinsic* factor, which consists of the absence from the stomachs of its victims of some necessary substance (which may be, but probably is not, hydrochloric acid), plus a diet lacking in some substance or substances, probably protein in character and derived from animal sources.

Anemia resulting solely from an unbalanced diet over a long period is of the secondary type and may be due to the lack of iron, vitamins or some other substance.

Pernicious anemia does not result from faulty diet alone, but can be brought on by a long-continued deficiency of animal proteins. Anemia of the pernicious type occurs in various gastro-intestinal disorders, where the diet has been severely restricted for a long period. The presence of chronic diarrhea seems to be a factor in the etiology of anemias of the primary type.

The anemia in hookworm infestation is not due solely to the worms, because the blood picture can be brought back practically to normal by feeding liver and iron, without removing the worms. Chronic malnutrition appears to be an important factor here.

The anemias showing a high color index respond best to the administration of liver and liver extract; those with a low index to iron.

VENTRICULIN IN PERNICIOUS ANEMIA

By C. C. Sturgis, M.D., F.A.C.P., and R. Isaacs, M.D., Ann Arbor, Mich.

All patients with pernicious anemia show achlorhydria as the earliest and most characteristic symptom, and the secretion of hydrochloric acid cannot be stimulated by injections of histamin. The defect causing the disease is probably not the hydrochloric acid, pepsin or rennin, but some unidentified enzyme.

Ventriculin should be cheaper than liver extract. The patient should take 10 Gm. daily *for each deficiency of* 1,000,000 *red blood cells which his blood shows*—if his erythrocyte count is 2,500,000, he should take 25 Gm. of ventriculin daily, in fruit or vegetable juices. When the blood picture becomes normal, he should take 10 Gm. from four to six times a week, as a maintenance dose. The appetite, nutrition and sense of well-being are increased.

The therapeutic substance in ventriculin is soluble in water and is readily destroyed by heat. It is present in the mucosa and in the muscular structures of the stomach.

If ventriculin or liver fails to cause improvement in the primary anemias, one of five conditions is present:

1.—The diagnosis is wrong.

2.—Acute infection is present (give more).

3.—The dosage is inadequate (increase it).

4.—The preparation is inactive (not uncommon).

5.—Gastric retention is present.

ADEQUATE TREATMENT OF THE ANEMIAS

By George R. Minot, M.D., F.A.C.P., and Wm. B. Castle, M.D., Boston, Mass.

In treating the anemias, *all* factors present must be attended to. There may be defects in the *individual* or in the *diet* or both. Exercise, rest and sleep should be considered. We must treat the *entire human being.* The lack of animal and fresh vegetable foods generally means a poor diet.

In pernicious anemia, *enough potent* material must be given, for life, to do the work in *that particular patient.* The maintenance dose varies widely, should be based on *clinical symptoms,* as well as on laboratory reports, and should keep the patient *as well as possible*—not merely reasonably well.

Liver, kidney and stomach are the most potent substances in the treatment of the primary anemias; brain is less so. Older patients, because they are arteriosclerotic, need *larger doses.*

If cord lesions are present, feed *large amounts of potent material*—whole liver seems to work best. If iron, in *large doses,* is added it gives better results when the hemoglobin is high and the color index low, indicating the presence of a complicating secondary anemia. If the patient has some hydrochloric acid in his stomach, the treatment should be the same.

In secondary anemia, the effect is not merely that of feeding hemoglobin. There is some effect on the general nutrition.

Iron is absorbed better in an acid than in an alkaline medium; but give *enough* (300 mgm. of *Fe,* as Blaud's mass or iron

and ammonium citrate, daily) and give it *long enough—after* the blood picture becomes normal; sometimes for life.

Liver is relatively inefficient in the secondary anemias, and iron is easier to take. Often a combination of the two produces the best results. Liver acts more on the red blood cells; iron on the hemoglobin.

Diet must be carefully considered and *individually prescribed*, on the basis of the patient's entire life history, especially his dietary history.

POSTOPERATIVE PSYCHOSES

By William Allanson White, M.D., Washington, D. C.

Any operation which involves an organ that is essential to a patient's expression of his life may be followed by a psychosis. Operations on the rectum frequently have such sequels.

We do not live in a world of reality, but in a world of our own perceptions. Most patients have little knowledge of themselves or of their bodies. We must try to estimate the *patient's* idea of an operation.

There was a man who was a famous player and teacher of the piano, and also a periodic drunkard. His only emotional and social outlet was through his music. He suffered a fracture of the clavicle and was elaborately treated by a careful surgeon, his arm being immobilized for three weeks. His hand, after this treatment, was permanently stiff and his playing was ended. He was a psychotic for the rest of his life and died in depression. The surgeon treated the *clavicle*, but not the *patient*.

Never do an operation of election on an organ of *emotional* and *social importance* to the patient. Before *any* operation, make complete *psychic*, as well as physical preparation. This sometimes takes a great deal of time, and should be done by someone in whom the patient has complete confidence.

CEREBRAL STIMULATION IN CATATONIA

By Karl Langenstrass, M.D., Washington, D. C.

Some years ago, experiments were made in stimulating the circulation and cellular functions of the cerebrum, in catatonic and stuporous schizophrenic patients, with the idea of changing their reaction and behavior.

The first attempts were made by the slow intravenous injection of about 100 cc. of an N/50 solution of sodium cyanide, and in several patients who had not spoken for months or years, it was found that, during such an injection, they were aroused and talked freely, giving histories of themselves, which were later verified.

These injections were, however, not wholly without danger, the stimulation was very brief, and subsequent injections failed to produce comparable effects.

About five or six years ago, Lorenz and Loevenhart, of Germany, reported similar results from the administration of inhalations of carbon dioxide and oxygen. They began with 5 percent CO_2 and rapidly increased the concentration to 20 percent, giving the gases for one minute. The period of stimulation lasted about five minutes, the patient then relapsing into his former condition of catatonic stupor. Later the concentration of the CO_2 was increased (starting with 20 percent and increasing to 40 percent) and the length of the inhalation extended to two minutes. The period of stimulation was thus increased to ten or fifteen minutes. With modifications of this method, periods of stimulation lasting up to half an hour were obtained, but the patients always relapsed into their former condition and no permanent benefit was observed.

With still further modifications of and additions to this method, we have obtained some very striking results, the first of which was seen in a man of 44 years who had been speechless and tube-fed for seven years. After the treatment, this patient promptly become bright and talkative and remained so for four hours before he relapsed. In two cases, the period of stimulation lasted for four or five days, after which the patients *slowly* relapsed into catatonic stupor. In four cases (whose histories will be sketched), the results appear to be permanent.

The treatment in these cases consisted of a preliminary course of pyretotherapy, raising the temperature, on alternate days, to 104°F. or more, by the intravenous injection of Coley's fluid or typhoid vaccine. About 15 injections were given, beginning with ⅛ minim (0.008 cc.) of the former or 0.1 cc. of the latter, and doubling the dose at each subsequent injection, if satisfactory reactions were produced.

Following this, the inhalation of carbon dioxide and oxygen was given, beginning with 5 percent CO_2 and 95 percent oxygen

and increasing the former by 5 percent, while decreasing the latter to the same extent, every two minutes, until the CO_2 reached 25 percent, at which point it was continued for from 25 to 30 minutes.

During the inhalation, psychotherapy was constantly applied, in the form of reassuring and helpful suggestions, and when the patient became aroused, this treatment was continued and combined with a course of psychic reeducation.

Case Reports*

Case 1: This patient had been in complete stupor for ten months. After the treatment he improved steadily, gained in weight and strength and, after a few weeks, went home and to work. He is still doing well.

Case 2: The stupor, in this case, had lasted for *four years*. After treatment the patient improved steadily and gained in weight and strength. He now works well, all day, about the institution, and could go home, if he had any home to go to.

Case 3: In this patient, the stupor had lasted for seven months, with (as in all these cases) speechlessness and tube feeding. After the first treatment there was a short period of stimulation, followed by relapse. The second treatment seems to have produced permanent improvement. The patient began at once, not merely to eat, but to assist in feeding others. She is now at home, taking care of four children and a drunken husband.

Case 4: This patient had been in stupor for *ten years*. One hour after the inhalation treatment he sat in a wheelchair and read a newspaper for the first time in a decade. For two months he worked well about the grounds; then he was transferred to the laundry, and made good. He is now working on the farm, and the manager says he is one of the best helpers he has had.

*Still and moving pictures of these patients, before and after treatment, were shown, and the changes produced were little less than miraculous.—G.B.L.

Buffered Procaine Solutions for Local Anesthesia

By Charles W. Freeman, D.D.S., *Chicago*

THE year 1930 marks the silver anniversary of procaine as a local anesthetic. Twenty-five years ago, Einhorn first presented this synthetic as an effective and safe material for obtaining local anesthesia by hypodermic injection. Since that time many substitutes have been presented, but none have been accepted as superior to procaine.

During this twenty-five years, local anesthesia has increased enormously in popularity, in general and special surgery, but in no field has it taken such an outstanding position as in dental surgery. The employment of a local anesthetic appears peculiarly adapted to many phases of dental practice and has largely supplanted general anesthesia in the dental office.

To a great extent the efficiency and safety of procaine is responsible for this change. The technic in anesthesia for dental purposes has not been modified in any essential since Fischer first popularized the conduction method in this country in 1912, but the great mass of dentists have now mastered the technic and use it in daily practice.

The anatomic structures have been carefully studied and the technics for various injections of local anesthetics for dental purposes have become standardized, and there is no probability of marked improvement in methods. It would seem necessary to improve the drug itself if we are to increase our efficiency in this field. So much has been done by the chemists and the pharmacologists in improving therapeutic agents that it is reasonable to expect some developments in this field after using procaine for twenty-five years.

Recent work done at Northwestern University Dental School[1] brought out the fact that procaine borate is as effective as a

1.—Dailey, Benedict, Freeman, and Arnim: Studies in Local Anesthetics. *Dental Cosmos*, July, September, October, 1929.

local anesthetic as is the hydrochloride, and that it is much more rapid in action and less toxic. This is not a particularly new salt of procaine, but apparently it has not received the attention it deserves.

In attempting to discover the reason for the more rapid action of procaine borate, Benedict[1] investigated the surface tensions and found that the solutions with a lower surface tension were more efficient, both by the goldfish test and in clinical experience. On further investigation, there proved to be a more definite ratio between the pH of the solution and its efficiency than between surface tension and efficiency. The pH of procaine borate, in a two-percent solution, is approximately 8.2, while that of procaine hydrochloride, in the same solution, is 5.6 and, in the many stock solutions prepared by manufacturers, the pH ranged between 3.3 and 5.4.

The extreme acidity of these stock solutions is apparently for the purpose of insuring stability and to prevent deterioration, but it cannot be accepted as being nonirritating when injected into the tissues.

The goldfish experiments were continued[2] with procaine hydrochloride in buffered solutions; that is, solutions to which had been added small amounts of alkaline reagents to raise the pH, and a definite increase in efficiency, in proportion to the rise in alkalinity, was noted.

The tests were made by immersing ordinary goldfish in known concentrations of various local anesthetic solutions, the time for complete anesthesia of the fish being noted in each case. Anesthesia was considered complete when the fish did not respond to the stimulus of prodding the tail with a glass rod. This may be a general anesthesia or it may be local in its final action; but this method at least has the advantage of placing the fish directly in a definite concentration of solution. In Table 1 the time required for complete anesthesia of the fish is given, in minutes and seconds. The concentration was 1:500, or one-fifth of one percent solution of the drug employed, in distilled water, except in one case where tap water was employed.

TABLE 1

DRUG	TIME
Procaine Borate	1:35
Procaine Borate plus 0.01 NaCl	2:39
Procaine	13:00
Procaine plus tap water	4:45
Procaine plus alkali buffer. pH 7.2	1:45

2.—Fosdick, Hansen, and Dragstedt: *Proc. Soc. Exptl. Biology and Med.* 27, 529, 1930.

Several such buffered solutions have been employed in the clinic at Northwestern University Dental School, over a period of twelve months, for a total of over 10,000 injections, the five solutions which proved to be the most effective being shown in Table 2. Epinephrin was added in suitable concentrations.

TABLE 2

Solution No.	Procaine	pH Value	Alkali	Amount of Alkali: grams per liter
4	1%	8.2	K_2CO_3	.7601
8	1%	8.2	Na_2CO_3	.5860
9	1%	7.2	Na_2CO_3	.3000
10	2%	7.2	Na_2CO_3	.3000
11	2%	7.25	K_2CO_3	.4800

These solutions were employed in the clinic in exactly the same manner and in the same amounts as is common practice with any local anesthetic. The pH value was determined, the anesthetic time on fish established and the solution injected into mice to determine toxicity. The results obtained in the clinic with these solutions were approximately the same as with procaine borate, a very high percentage of the injections giving complete anesthesia, even in 1 percent solutions; and the average time for complete anesthesia in a mandibular injection was not over 3½ minutes, while the shortest time was as low as 30 seconds. In corresponding injections with the more acid solutions, 10 to 15 minutes is required for operative anesthesia.

The use of a solution with a pH of about 7.2 was suggested by the fact that this is approximately the hydrogen ion concentration of the blood, and that a solution conforming as nearly as possible to normal blood in alkalinity should cause the least possible local tissue disturbance. The solutions with a pH of about 8.2 appear to be the most rapid in action, but those corresponding to the blood in alkalinity are markedly more rapid than the usual acid solution.

The disadvantages of the alkaline solutions must be brought to attention as well as the advantages. The most outstanding disadvantage is the fact that the alkaline solutions, whether the borate or a buffered hydrochloride salt of procaine, *are not stable*. They apparently are more rapidly oxidized, and this is especially true after the epinephrin is added. It would appear

from our studies that an alkaline solution cannot be manufactured in ampule or carpule with any expectation that it will keep safely, although it may be possible to raise the pH from the extremes which are found in some of the products on the market.

We have never felt that a stock anesthetic solution, whether in bottle, ampule or carpule, was as desirable as a freshly prepared solution, and for that reason we favor a solution that cannot be made up in stock and kept for an indefinite time before using.

The buffered solutions or tablets containing alkali have not been prepared for marketing and probably will not be until further investigations have been made to determine the exact combination which gives assurance of being most efficient.

Our experiences of more than a year have convinced us that the buffered solutions are more rapid, equally efficient and cause much less postoperative disturbances, than the more acid solutions which are on the market and which have been almost universally used in the past.

8 South Michigan Avenue.

Medical Credit Cooperation

By G. M. Russell, M.D., *Billings, Mont.*

THE nature of physicians' training is such that their sense of self-importance, individually and collectively, is morbidly exaggerated to such an extent as totally to submerge any economic orientation they may have had before entering upon the study of medicine. The average physician has the judgment of a ten-year-old in financial matters and things pertaining to them.

The principal difference between a physician and an artisan is that the physician has to put in longer years of preparation and his lessons are considerably harder. It is probable that there are many men in the skilled workman class who could have become physicians above the average, if they had had the opportunity. In spite of the supposedly higher order of mentality, combined with the long intensive study of the professional man, the artisan has shown his immense economic superiority in exacting equitable wages and compelling the payment of them. To assume the role of superman in the face of the peurile handling of the pecuniary end of medical practice in evidence, is superlatively ludicrous, amounting to travesty.

The average physician can be given credit only for superiority in the narrow channel of his scientific attainments and ability to diagnose and treat diseases. He is ignorant of general business and adheres to his self-conceived methods, with the hope that they will enable him to collect a decent percentage of his earnings with the same degree of assurance of success as he would have in taking a chance on a throw of the dice. At the same time, he exhibits the intolerance to enlightenment and suggestions as to correction, shown by all ignorant people.

When one makes arrangements for credit with a large mercantile establishment, his record is looked up through Bradstreet's, Dunn's or other credit bureaus, as to the amount he owes other people and his ability and willingness to pay. Even small stores avail themselves of this method of determining the safety of extending credit.

When a patient presents himself for attention, the physician is confronted with a human being, physically incapacitated and suffering. He immediately exudes sympathy and compassion and is psychologically influenced to do the Samaritan act —is overwhelmed with humanitarianism— which mental attitude most frequently results in the complete extinction of any concern as to the remuneration he is justly entitled to receive. Instead of payment eventually being tendered him, he is more likely to be subjected to criticisms, and even, in some instances, to malpractice suits, if he endeavors to enforce payment.

It is the custom of a certain percentage of families and patients to employ a physician until a considerable bill has been accumulated and, when pressed for payment, to transfer their patronage to another, where a similar occurrence takes place.

Such a procedure is persisted in until such persons owe anywhere from two or three to a dozen or more physicians. There are few physicians who have not had this racket worked on them. Nothing has ever been done to stop it. Physicians are fools to permit it to continue.

Men as intelligent as physicians are supposed to be, in allowing such a condition of affairs to exist, are, to say the least, not to be commended for their competence in taking care of the financial end of their business. It is probable that there are very few physicians, in practice over five years, who have not on their books anywhere from $5,000 to $75,000 or $100,000 which could and should have been paid them by people not considered paupers or coming under the classification of charity cases. In other words, the largest percentage of a physician's losses results from his gullibility in being duped by deadbeats.

Such a state of affairs can be overcome by co-operation by compulsion.

A Way Out

The problem would be solved if the physicians belonging to a local medical association would pass a by-law providing that each member shall send to a clerk or secretary employed for that purpose (hereafter termed "credit officer"), on the first of each month, a list of accounts which he has concluded he is unable to collect, giving the name, address and amount of the indebtedness; that it shall be the duty of the credit officer to make up a mimeographed list of the accounts on all the lists sent him, giving the names of the debtors, with the amounts due, omitting the names of the physicians reporting them if deemed advisable; that such list shall be sent to each physician by the 10th of each month; that each physician shall agree not to give service to any one on that list until he has communicated with the credit officer and has been notified that satisfactory arrangements have been made for the payment of former indebtedness to physicians; that as soon as satisfactory arrangements have been made for settlement, that fact shall be reported to the credit officer, and he then shall report such settlement to the physician who has been appealed to for service, when he shall be at liberty to serve. The only exception to the execution of this law would be in case of extreme emergency, and as soon as the emergency had passed the law would again apply.

The enforcement of such a law could be brought about by the assessment of large fines or the sentence of expulsion from the association for non-compliance. As the last penalty would automatically expel from the State and American Medical Associations, there would be few who would not comply. Those who became "scabs" and persisted in serving such people would eventually discover the serious disadvantage of their resistence, by reason of the fact that the entire load of deadbeats would be dumped upon them, causing them to spend a considerable portion of their time in serving people who would never pay them. For those who complied, it would be good riddance.

These methods, persisted in and becoming known to the public, would result in patients making an effort to pay their bills, for the purpose of keeping their credit good and thus securing prompt medical service when needed.

This by-law should also provide, that, in case of a charity patient or family, certified by proper authority, physicians should give service. For this purpose proper arrangements should be made with the county and city officials, providing for nominal payment for services rendered. This would permit the poor to have a selection of physicians, which privilege most of these people would like to have and are now denied. It would also do away with the charity duties of the county and city health officers.

This method could easily be made to function throughout an entire state by co-operation between the various county medical associations, exchanging lists of delinquents leaving the locality, and could equally as easily be extended to nation-wide operation, through exchange of such lists between the State Medical Associations. In this manner, the enormous number of patients and families in one locality, leaving for parts unknown without providing forwarding addresses, could be readily located and would suffer the same inconvenience in being denied medical service in their new homes as though they had remained where their obligations were incurred, until such time as former indebtednesses had been properly taken care of.

The American Medical Association could very successfully compel the initiation, adoption and strict observance of such a system by constituent associations, as a prerequisite for the acceptance of members from those associations. This would be the

most beneficial thing that could be done for the medical profession. It would enable physicians to collect millions of dollars that are now irretrievably lost; would serve to unify them more closely, and would result in a greater degree of brotherly concern for each others' material welfare than has ever existed. Furthermore, it would enhance respect for the medical profession in the lay mind.

The American Medical Association has an economic bureau, which does not seem to have accomplished much of material value. It is my opinion that the employment of a high-grade efficiency expert, to outline a definite course of procedure, would be an excellent move.

The one criticism that can be made of the American Medical Association is that it does not extend its powers to control the economic ills that confront medical men in every community. It can easily do so, and there is no reason why it should not embrace the financial, as well as the scientific, welfare of the physician in its sphere of action. While engaged in requiring reformation along these lines, the Association could, simultaneously, require reformation in the matter of objectionable overcharges being made by certain specialists and surgeons, which are the chief source of rebellion against the high costs of medical care, threatening us with State Medicine or something worse.

The physician is a wage earner, dependent upon his individual efforts, just the same as is the plumber, carpenter, brick layer, etc. Artisans are protected by laws providing for liens against property. No such provisions are made for the physician, and it is therefore up to him to protect himself. If, by combining their efforts along this line, physicians can place themselves on practically a cash basis, it is apparent that it would be the judicious thing to do.

There is but little prospect that any plan of this nature will be adopted, because of the lethargic inactivity, amounting almost to coma, infesting the medical profession in connection with anything pertaining to its welfare, outside of the definite science and art of medicine. There seems to be a rabid antagonism displayed whenever an effort is made to establish some semblance of order in the midst of the chaotic condition existing. We are, today, exactly in the position of the patient who fights against the administration of medication that will relieve him of his suffering or prevent his death.

Stapleton Bldg.

The Law and the Doctors

The American College of Physicians, meeting in Baltimore, voted a protest against the restrictive laws which interfere with their prescription of drugs and alcohol. The law, depriving the physician of discretion, denies reputability to the profession and endeavors to take from the patient the aid or relief which the doctor would give him. The restriction is based upon the assumption that the medical profession would go out of hand and become a social menace if it were permitted freedom of prescription.

If this assumption is not slanderous, then the country is in a bad way, indeed, its sick being dependent upon professional men and women who would turn bootleggers and drug peddlers if the law did not police their medicine cases and prescription pads. In this respect the drug restrictions are even more barbaric than the whisky and malt limitations. They are the products of jaundiced minds gone quite off the handle in a voodooistic ectasy.

The Wickersham commission hit the medicinal liquor restrictions as indefensible. The whole policy of interference with the physician at the sickbed is uncivilized. It is a part of the witch hunt, something out of an unbalanced mentality.—From an Editorial in Chicago Tribune, *April 7, 1931.*

PHYSICAL THERAPY AND RADIOLOGY

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PHYSICAL MEDICINE

ONE of the most distressing things about the special fields embodied in this department is the shockingly messy condition of their nomenclature and the loose way in which old and sedate words, whose meanings have been well recognized for decades, are made to step out and trip to a jazzy measure.

We had, first, *physiotherapy,* which meant very little and had a bad name from being part of the hokum of the charlatans who hovered in the antechamber of the lying-in room when the new resources for healing were being born, and carried off the lusty infant for a while and made it serve their nefarious purposes, until it was rescued by the rank and file of the medical profession, who rechristened it, *physical therapy,* which is a much more defensible expression. Other scrambled locutions will come readily to the mind of every reader.

With the beginning of its sixth volume, the *British Journal of Actinotherapy and Physiotherapy*—an unwieldly and tongue-twisting title—becomes the *B. J. of Physical Medicine,* thereby demonstrating that our cousins across the water have a far stronger sense than we have of the dignity and expressiveness of the language which bears their name.

PHYSICAL MEDICINE indicates the whole field of treatment by physical methods, exclusive of surgery, which is, of course, a physical method of treatment too strongly intrenched to be absorbed under this general head. In fact, there is growing doubt as to whether the various electrosurgical technics should be included (as many do) under the name of physical therapy, or better, physical medicine. Radiology, is, naturally, included; but does x-ray diagnosis properly fall under this heading?

We have a strong notion to change the title of this department to PHYSICAL MEDICINE, in accordance with this newer and highly reasonable usage. What do our readers think about this and about the other questions here raised?

We shall be very glad to hear from as many as possible of those who have thoughtful and constructive suggestions to offer and shall actually consider such suggestions in shaping our future policy.

G. B. L.

Ultraviolet Radiation During the Gestation Period

By G. J. Warnshuis, M.D., *Cedarburg, Wis.*

WHILE the high cost of having babies is likely to prejudice one against introducing any measure that adds to the cost of obstetric care, it can be shown that, in most instances, a properly arranged, conservative course of ultraviolet irradiation during pregnancy, not only adds to the wellbeing and comfort of the expectant mother, but, because of its effectiveness in preventing disastrous complications and the stimulating action on lactation, it may be the means of saving many times its cost in other ways.

Perhaps it is unbecoming to approach the discussion of a medical subject from an economic standpoint, but I feel that it is pardonable in this instance, because it is just such considerations that have stood in the way of a wider application of this important measure to the prevention and treatment of the complications of pregnancy and parturition.

From a strictly theoretic standpoint, there is considerable evidence to indicate that many of the disturbances of pregnancy may be directly associated with the deficiencies and disorders of metabolism and organic function, that develop as a result of an inadequate exposure to ultraviolet radiation. A striking example of this close association between the life-giving rays of the sun and such a grave disorder as eclampsia is the study made by Harrar a few years ago, on the seasonal incidence of eclampsia. The impressive contrast in the number of cases occurring in the late winter and early spring, as compared to the summer and fall months, demands some reasonable explanation.

Endocrine Disturbances

Additional force is given to this observation by the fact that many of the characteristics of eclampsia are suggestive of an endocrine disorder and a calcium deficiency, such as occurs in parathyreoprival tetany. Greenhill, of the New York Lying-In Hospital, observes that many eclamptics are of the pituitary type, as shown by obesity, masculine pelvis, masculine distribution of hair, thick skin, etc.

Certainly, it is not unreasonable to suppose that, with such a profound change in endocrine balance as occurs with the cessation of ovulation and the development of the corpus luteum with its specific secretion, certain maladjustments may take place in the absence of so important a catalytic agent as the ultraviolet rays. The frequency with which other symptoms of endocrine disorder develop in pregnancy is further indication of the relationship of eclampsia to ductless gland dysfunction. Pituitary headache—characterized by its location in one or both of the orbits, a feeling of intracranial pressure and associated visual disturbances—is not an infrequent symptom. Enlargement of the thyroid and aggravation of hyperthyroidism are often observed in pregnancy. Administration of corpus luteum or whole ovarian substance is an accepted method of treatment in hyperemesis gravidarum.

The influence of ultraviolet radiation in promoting normal endocrine function and balance has been established, not only by direct experimental and clinical observation, but also by reason of the intimate relationship between mineral balance and endocrine activity.

As an example of the direct action of ultraviolet radiation on ductless gland activity, we may cite the experimental studies of Sir Francis Humphris. After treating a series of rabbits, for a period of three weeks, with daily exposures of ultraviolet rays, the rabbits were killed and the weight of the endocrine glands compared with that of the glands removed from a similar number of controls kept in ordinary light. There was found to be a definite increase in the size of the glands of the irradiated animals, most of all in the parathyroids, in which the increase varied from 14.1 to 50.1 percent, over that of the controls. The gonads showed the next greater increase and the other glands in less proportion.

The direct effect of ultraviolet rays on the endocrines and the reproductive system has also been demonstrated by the experimental work of Hughes and Payne on egg production and egg fertility in the domestic fowl.

The clinical improvement in spasmophilia under ultraviolet irradiation may be attributed directly to the effect on the parathyroids, or it may be assumed that the improvement in the calcium fixation is the result of the increased parathyroid function. The fact, however, that it has been shown that there are material differences between the effect of parathyroid administration and exposure to ultraviolet rays, would lead us to the opinion that the disturbance of calcium metabolism involves other factors besides that of parathyroid function.

Calcium Deficiency

It can not be disputed, however, that calcium metabolism and endocrine function are closely inter-dependent. According to Magnus Levy, the thyroid gland contains more calcium than any other soft tissue in the body—an average of 33.7 mg. per 100 Gm. of gland tissue.

Whether or not we are convinced of this direct action of ultraviolet irradiation on the internal secretions, the great drain on the calcium reserves during pregnancy, as exemplified by the saying, "For every child a tooth," is a condition that needs to be accounted for and combated with something more than limewater and calcium lactate. Sherman and McLeod, in experiments on rats, found that a loss of 10 per cent of the calcium reserves in the skeletal system took place during pregnancy and lactation. On the other hand, the normal calcium requirements in a non-pregnant, non-lactating animal are easily supplied in the ordinary diet, and average only about 0.3 Gm. per hundred pounds of body weight.

While the deficiency in calcium during lactation may be attributed, in some degree, to its excretion in the milk, there is very little additional utilization of calcium during pregnancy. Only a trifling amount of calcium enters into the growth of the embryo or the cartilaginous skeleton of the fetus. The occurrence of a lowered blood-calcium in pregnancy must be the result of an increased excretion or, more likely, a decreased ability to assimilate it. Even during lactation, it has been shown by Steenbock and by Orr and his associates, that a negative calcium balance can be made positive by ultraviolet irradiation. It would appear, therefore, from these observations, that we are dealing with a nutritional disturbance in pregnancy and lactation, similar to that in rickets and spasmophilia. This is further substantiated by the fact that many infants are born with symptoms of rickets, impaired digestive function, pylorospasm, etc.

The clinical studies of Hess, Colebrook, Humphris, Gerstenberger and others have demonstrated that lactation is not only, in many cases, improved in quantity and quality by irradiating the nursing mother, but the anti-rachitic potency of the milk is greatly increased. Such postpartum deficiency can be more readily prevented by irradiation before delivery, with consequent benefit to the patient during the prenatal period as well.

Aside from its value in preventing the toxemias of pregnancy and the possibility of rachitic offspring, it is fair to assume that, with the wellknown effectiveness of ultraviolet rays in promoting greater resistance to infection, the danger of puerperal infection may be lessened by this means. In fact, it is not unlikely that the higher incidence of puerperal sepsis in this country, compared with others, in spite of our greater aseptic precautions, can be attributed in part to a difference in dietary regimes.

Clinical Considerations

While the conditions of private practice make it difficult always to put our convictions into effect as extensively as circumstances warrant, especially when such convictions require an innovation from customary procedures, nevertheless I have had an opportunity to see some rather impressive benefits result from the application of ultraviolet rays during the gestation period.

Not the least noticeable benefit observed was that the course of labor invariably followed a normal development, the cervix dilating readily during the first stage, and strong, uniform contractions occurring during the second stage, leading to a steadily progressing expulsion of the fetus. This is in such sharp contrast to the long-drawn-out, irregular course that we so frequently see, often requiring pituitary extract during the second stage to bring about satisfactory contractions, that I can not disabuse myself of the opinion that the mechanism of labor is just as much included in these nutritional deficiencies as are the other effects I have described.

As an example of the good results that can be secured, the case that impressed me

most was that of a multipara who received several irradiations of the entire body, after the fourth month of pregnancy. She complained of painful varicosities of the lower extremities, occasional headaches and flatulent indigestion. There was considerable improvement after the first irradiation, particularly in the condition of the varicose veins, to which sufficient radiation had been given to produce a distinct counterirritant effect. Four irradiations were given in a period of two weeks and occasional treatments after that. This patient had had four children prior to this pregnancy and had been unable to maintain sufficient breast secretion to nurse any of them. Her labor, in this instance, was completed in a period of five hours and progressed with a minimum of distress, although the child was fully developed and weighed 8 pounds The most remarkable result was that this baby thrived on the breast for eight months, although no irradiations were given after parturition.

Amount of Treatment Needed

My experience in such cases, as well as my observation of the response in other conditions, convince me that a great deal of benefit can be derived from a very few irradiations. It is not necessary to carry out daily treatments over a long period to secure and maintain the full effect. It is this sort of practice that creates prejudice against light therapy and raises the suspicion of commercialism. I can not recall, in all my investigations, any instance where better results were obtained by daily exposure than could have been secured by irradiation on alternate days or even semi-weekly.

The maximum effect follows the first two or three treatments. The purpose of subsequent treatments is to maintain the curative process that has been set in motion by the original stimulus of the first week of treatment. The frequency and amount of such treatment will be determined largely by the character of the response and the degree in which the symptoms subside and improvement is observed.

A minimum course of treatment should consist of a week or two of irradiations over the entire body, every other day, beginning about the second month of pregnancy. Two or three months later a similar course should be given. When conditions permit, it is advisable to give, in addition to this, three or four irradiations after the seventh month.

In estimating the benefit to be derived from this regime, it is well to bear in mind that toxic and nervous symptoms may arise from other causes than an endocrine dysfunction or a vitamin deficiency. The most important of such causes are focal infection, nephritis, loss of sleep and improper or insufficient exercise.

No amount of feeding of a diet rich in vitamins can take the place of the energizing effect that ultraviolet radiation has on growth and nutrition. Vitamin feeding may ameliorate to some degree the lack of ultraviolet radiation, but it is a most unsatisfactory substitute, especially when a deficiency condition has become established.

I heartily agree with the words of Sir Francis Humphris when he says, "Both for her own welfare and that of the unborn child, let the expectant mother have some form of light therapy regularly for the duration of her pregnancy. Apart from being an insurance against the production of unhealthy offspring, the mother will experience a sense of health and wellbeing not always obtaining among women laboring with child, but which usually accompanies the administration of general light therapy. Furthermore, treatment by light should be continued throughout the period of lactation."

Surely the occurrence of 15,000 deaths annually in the United States, from causes directly associated with childbirth, does not permit a complacent attitude toward a constructive measure that has given so much sound proof of its value.

Work

Thank God every morning when you get up that you have something to do which must be done, whether you like it or not. Being forced to work, and forced to do your best, will breed in you temperance, self-control, diligence, strength of will, content and a hundred other virtues which the idle never know.—Charles Kingsley.

Roentgenographic Diagnosis of Diseases of the Colon and Rectum

By J. F. Montague, M.D., *New York City*

If you were to drop into my clinic intent upon carrying away something worth while pertaining to rectal diseases, your wishes might be satisfied in one of two ways: First, it would be possible to show you many cases of the most frequent recto-colonic ailments, each one very like the other and each one a very common condition in the field of rectal diseases—so common, in fact, that the general practitioners in a given community probably see more cases of hemorrhoids and fistula than any one specialist sees. In my opinion such a display would not be particularly impressive nor instructive. If, on the other hand, by good fortune or by means of that wonderful instrument of record, the motion picture, I were able to show you several rare cases of rectal disease, such as it has been my privilege to see on only a few occasions during a long experience with these, you would undoubtedly be impressed, but I doubt very much whether the "show" would have any practical value, since the likelihood of your ever seeing a similar case would be infinitely small.

Rather than surfeit you with commonplace cases or, on the other hand, attempt to dazzle you with extraordinarily uncommon cases, I would much prefer to discuss a phase of rectal diseases which, in my opinion, is of great importance to the general practitioner and which is often overlooked in both general and proctologic practice. I refer to the employment of the x-rays in diagnosing diseases of the lower colon and rectum. This very valuable component of our diagnostic armamentarium is greatly underestimated, frequently neglected, and certainly not appreciated.

There are certain points of agreement from which our observations may start. For instance, we all know that the employment of roentgenography has long been commonplace in the diagnosis of diseases of the intestinal tract. No up-to-date internist thinks of coming to a final decision in a case presenting features in any way out of the ordinary without recourse to x-ray examination of the alimentary canal during the passage of the barium meal. The films form as important a part of the findings as any other evidence which may be forthcoming; indeed, not a few diagnoses are made upon the roentgenographic evidence alone, much as such a proceeding is decried by those of the widest experience and keenest diagnostic acumen.

It seems odd, therefore, that the proctologist, whose field of endeavor is limited to a relatively small portion of this same digestive canal, should not be equally alive to the importance and convenience of frequent and complete roentgenographic examinations. Yet it is the exception rather than the rule that such investigations are carried out when only the lower portion of the large bowel is under scrutiny. A small number of proctologists have long been alive to the advantages of using x-rays in their work, but the interest has never been general.

As long ago as 1916, LeFevre told the American Radiologic Society; "To the proctologist the x-rays are of value, just in proportion as he is interested above the sigmoid flexure. To this point he can see with his proctoscope, above which it is visualized by the aid of the opaque meal or enema." This, I believe, still represents the view of a conservative minority of those giving special attention to diseases of the rectum. My opinion, formed after seeing a considerable number of cases wherein some very important diagnostic evidence would have been missed entirely had not films of the evacuation of the barium enema been made, is that roentgenographic examination is just as valuable in exploration of the colon and rectum as is the recto-sigmoidoscope, and should be employed with precisely the same frequency.

Suggestions and Indications

Fluoroscopic examination will often reveal conditions—even below the recto-sigmoidal juncture—the limit usually set by those who already employ the x-rays in rectal work—that the longest sigmoidoscope will fail to put in evidence. This is par-

ticularly the case with pedunculated growths, whether malignant or benign. The introduction of the beak of the instrument is likely to push such a growth upward before it as it enters, so that it may never come within the examiner's range of vision. The downward passage of the barium enema has a precisely opposite effect, and the outline of such a growth will show up plainly upon the fluoroscopic screen. Eight ounces of barium, suspended in a quart of buttermilk, plain milk or cereal gruel, provides an enema of ample bulk to give an outline sufficient for the proctologist's needs of visualization. The examination is now so quickly and simply made, with the aid of a competent roentgenologist, that there is no excuse for anyone, be he specialist or general practitioner, who neglects to employ this highly important aid to diagnosis.

The barium enema with roentgenographic examination should be used in all cases of :(1) hemorrhoids, in a subject more than thirty-five years of age; (2) chronic and obstinate constipation; (3) hemorrhage from the lower bowel, the origin of which is not immediately apparent; (4) perineal pruritus, the cause of which is obscure; (5) acute constipation, in a subject who previously has had normal bowel action; (6) rectal or sigmoidal polyps; and (7) obscure and unexplainable symptoms such as "heaviness" or "burning" in the rectal region. If all such cases were promptly viewed by the aid of x-rays, many a rectal carcinoma, which is now being permitted to progress to the stage where help is uncertain or impossible, would be recognized in its incipiency and stand a good chance of permanent relief.

From the range of an experience of considerable magnitude, in a practice limited to affections of the region of the colon and rectum I will cite a few cases to show how a diagnosis, which would otherwise have been impossible, was reached by the aid of an examination made as here advocated.

Case 1: A woman of middle age was referred to me because of persistent, unexplained bleeding from the bowel and a steady loss of weight and strength. The diagnosis of the referring medical attendant was carcinoma of the colon, and my opinion was sought as to the operability of such a growth.

Examination with the recto-sigmoidoscope was entirely negative, but as the growth was presumably at a point higher in the bowel, resort was then had to the observation of barium enema evacuation. Fluoroscopic observation, with study of films obtained at the same sitting, showed a marked diverticulitis, but absolutely nothing pointing to the existence of malignant disease.

As the patient had been convinced that she "had cancer," it was with some difficulty that the facts set forth by the x-ray findings were made clear to her. She was finally persuaded to take a more cheerful view of the situation and, under treatment, the symptoms which had caused her such alarm greatly improved. With proper attention, the condition became quiescent and appears likely to remain so indefinitely.

Case 2: A woman, aged forty-four, suddenly developed obstinate constipation, while at the same time she was conscious of soreness in the left iliac fossa and pain high up in the rectal region. Referred for rectal exploration, I was unable to find anything amiss during rectoscopic examination of the anus, rectum and sigmoid flexure Abdominal palpation, however, when carried out over the point where soreness had been complained of, revealed a mass which strongly sugggested the presence of some type of neoplasm. The passage of the barium enema failed to confirm this suspicion. The findings showed plainly that the condition was certainly not malignant, as had, not unnaturally, been suggested by the patient's age. The final diagnosis was a state of chronic intestinal stasis, which the gradual formation of adhesions had suddenly rendered acute. Under a regimen of dietetic restriction and a course of colonic irrigations, all the symptoms disappeared, and no further suspicion of carcinoma has ever been entertained.

Case 3: A man, above thirty-five years of age, apparently in robust condition, was referred with a diagnosis of "hemorrhoids" and a request for their removal. Routine preliminary examination showed internal hemorrhoids, and no other suspicious appearances were revealed by complete recto-sigmoidoscopy. Had I halted there, the next logical step would have been operative removal of the observed pathologic lesions. But because of the rather wide experience to which I have already made reference, I did not proceed at once to operation. Because of the patient's age, it seemed the part of prudence to make a somewhat more detailed study. Accordingly, he was referred back to his family physician, with the suggestion that the progress of a barium enema be watched under the fluoroscope. The medical attendant thought this was an unnecessary precaution, but after some persuasion he gave his assent. The x-rays revealed carcinoma of the descending colon, but fortunately still in the operable stage. Given the appropriate surgical attention, exploration showed an annular carcinoma, which had given absolutely no symptoms aside from the sudden tendency to constipation, which had served to call attention to the presence of the internal hemorrhoids. Had the barium study not been made, the trauma incident to the removal of the hemorrhoids would undoubtedly have aggravated the malignant condition, and the gravest consequences would inevitably have ensued. As it was, appropriate treatment of the carcinoma gives good hope of ultimate control of the malignant condition.

The advantages of making a routine of x-ray examination of the colon and rectum, after injection of a barium enema, are not

so generally appreciated as they should be. Special emphasis may very well be laid upon such routine employment. Its uses, especially in the early detection of malignant tumors, should be realized by all who have occasion to treat pathologic conditions in the rectum and colon.

139 East 36th St.

CLINICAL MISCELLANY

Graham Test Reports*

THE classification of all Graham test reports into the following four groups seems to me to be logical:

1.—"*Normal*": When the shadow is uniformly and sufficiently dense, of normal contour, free from defects or "holes" in the cholecystic area due to stones or polypi, and exhibits normal clearance.

2.—"*Stone Positive*": When non-opaque stones are revealed by the "holes" in the gall-bladder shadow, due to displacement of visualized bile. Stones are sometimes better shown in the partially emptied gall-bladder, half an hour after the fat-containing breakfast.

It is manifestly not necessary to use Graham's test when opaque stones are present, unless doubt exists as to their exact identity. In rare cases, polypi may be confused with small stones.

3.—"*Absence of Shadow*": When no definite gall-bladder shadow can be demonstrated.

In some cases the vesicular shadow is superimposed upon that of the spine or as low as the iliac crest, and is thus easily overlooked, leading to an erroneous report of "absence of shadow." Sufficiently large films must be used to prevent this cause of error.

In 75 percent of the cases of "absence of shadow" by the intravenous method, operation reveals stones; in another 15 percent, gross cholecystic disease without stone; and in 8 percent, extracholecystic biliary tract disease, such as common duct stone or carcinoma, hepatic cancer, abscess, cysts, cirrhosis or tumor of the head of the pancreas.

4.—"*Pathologic, Non-calculous*": For those cases not included under the three classifications, the shadow being too faint or much too long in disappearing (two or three days or more); the gall-bladder shadow exhibiting irregular contours or distorsion, suggesting pericholecystic adhesions; or disturbance, both of contours and of concentration and evacuation. They commonly subdivide this class into Grade 1, 2, 3, or 4, the latter being the worst and almost as damning evidence as "absence of shadow," provided the intravenous method has been used. In a large series of cases confirmed at operation, stones were found in less than 5 percent where they reported "pathologic, non-calculous," and these were usually very small stones.

Some physicians do not seem to appreciate the great significance of "absence of shadow." Patients have protested payment of the charge for cholecystographic examination, remarking, "My doctor says the examination failed to show the gall-bladder."

When obtained by the intravenous method, or repeatedly confirmed by the oral test, failure to visualize the gall-bladder is one of the most reliable signs of biliary tract disease.

JAMES T. CASE, M.D.,

Chicago.

*Adapted from *Bul. Chicago M. S.*, March 28, 1931.

Actinotherapy for Acne

Acne may be treated either by large or by small repeated dosage of the actinocautery. In the large doses, one application for 10 or 12 minutes is made, but it causes a painful reaction and often edema. Small dosage is given every day or at least every second day, the first day for 2 minutes and for 1 minute on each following day until a slight erythema appears. Facial massage may be given in addition.—DR. R. MIGNOT, in *Presse Méd.*, Paris, July 2, 1930.

Heliotherapy in Pulmonary Tuberculosis

Five years' experience of direct heliotherapy and aerotherapy (in Arizona) has led to the definite conclusion that the number of patients with pulmonary tuberculosis

showing appreciable improvement, that might be attributed solely to direct heliotherapy, was negligible.—Dr. B. L. Wyatt, Tucson, Ariz., in *Ann. Intern. Med.*, Oct., 1930.

Diathermy in Breast Cancer

It is perhaps not yet generally realized how great are the advantages which the diathermic needle presents over the scalpel in the removal of breast cancer, as indeed in many other fields of surgery. The method represents, not a mere optional variation in technic, but a striking improvement. Its advantages depend mainly upon three peculiarities of diathermic cutting; (a) That it seals most of the small vessels as it cuts them and so minimizes loss of blood; (b) that it divides nerves almost without stimulating them and leaves their exposed ends insensitive; (c) that during the operation it supplies heat to the body generally and especially to those parts which are exposed for the purposes of the operation. The three principal causes of operative shock; namely, violent nerve impressions, loss of blood and loss of heat are thus minimized.—Dr. W Sampson Handley, in *Practitioner, Lond.*, Oct., 1930.

Prevention of Seasickness

Seasickness has been prevented and cured by the use of the concussor and vibrator. The concussion or vibration is applied to the interspace between the fourth and fifth dorsal vertebrae. About 30 strokes of the concussor suffice, one stroke every 2 seconds. The concussor is applied whenever there is a tendency to nausea.—Dr. I. D. Mischoff, in *Med. Herald and Physical Therapist*, May, 1930.

Radium in the Treatment of Menorrhagia

In cases where the patient is over 40 years of age and suffering from irregular hemorrhage without a gross pathologic lesion, the production of an artificial menopause by means of radium is the treatment of choice, if drugs fail.

The optimum dose of radium seems to be 50 mg. of the element, screened with not less than 0.5 mm. of platinum and kept in the uterine cavity for forty-eight hours.

In cases where the patient is over 40 years of age and suffering from pure menorrhagia without any gross pathologic lesion, x-rays should be considered as an alternative method of producing an artificial menopause.

In young women, where other treatment has failed to cure the symptom of uterine hemorrhage or menorrhagia, radium has been used successfully to cure this symptom, but there is a risk of permanent amenorrhea and severe menopausal symptoms, which perhaps makes subtotal hysterectomy preferable in the majority of cases.—Malcolm Donaldson, M.B., F.R.C.S., in *Brit. M.J.*, Nov. 15, 1930.

Cosmic Rays and Cancer

There is not the slightest evidence that the socalled cosmic rays—those coming presumably from far distant space and resembling x-rays and the gamma rays of radium—are now more abundant than in the past; nor is there the slightest evidence that such rays are in any way associated with the alleged "alarming increase" in cancer.—Editorial, in *Am. J. Cancer*, Jan., 1931.

Ptosis of the Eyelids

I have never seen a case of ptosis of the eyelids improved by the use of massage or electricity. Surgical procedures are necessary.—Dr. W. R. Parker, of Detroit, in *J. Indiana S. M. A.*, Dec., 1930.

Therapeutic Exercise

No patient should be told merely to exercise a joint. It is the duty of every physician prescribing exercise to give definite directions as to the amount and kind. In the case of the patient with average intelligence, the anatomy of the part to be exercised and the reason for the exercises should be explained to him. To those who understand considerable anatomy, definite instructions should be given.—Drs. J. S. Coulter and C. O. Molander, of Chicago, in *J.A.M.A.*, Nov. 1, 1930.

Electrosurgery

Many cases of malignant disease that could not possibly be treated with any chance of success by operative surgery could be successfully treated, either by some form of electrosurgery, radium, the x-rays or a combination.

Electrosurgery should be employed only by those who have had good general surgical training. It is neither easy nor to be undertaken lightly. Thorough preparation should, therefore, be made before engaging in what might be a hazardous procedure.—DR. W. L. CLARK, of Philadelphia, in *Internat. J. Med. & Surg.*, Sept., 1930.

RECENT ABSTRACTS

Roentgen-Ray Diagnosis of Small Pleural Effusions

There is much disagreement among authorities on diagnosis, regarding the shifting of pleural effusions with change in position of the thorax.

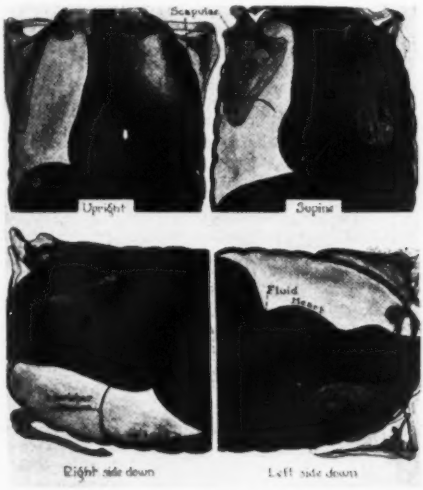

Fig. 1.—Drawings from tracings of roentgenograms, in various positions, from a case of pleural effusion secondary to Hodgkin's disease. The marked movement of the left-sided effusion with change in position of the thorax and the absence of evidence of fluid on the right side in the upright, supine and left lateral decubitus position is noticeable. With the right side down, a shadow parallel to the right costal margin characteristic of fluid is shown. The appearance of an interlobar effusion in this view, but absent in all others except the supine, in which the shadow suggests interlobar thickening, may also be noted.

In J.A.M.A., Jan. 10, 1931, Dr. L. G. Rigler, of Minneapolis, reports the results of a study of this subject. All patients in whom there was evidence of pleural effusion in the usual upright or prone postero-anterior roentgenogram, were also roentgenographed in a variety of other positions—prone, supine, etc. In this study, the free movement of all pleural transudates and most pleural exudates was definitely established. Only those cases in which there is a large amount of fibrin or pleural adhesions or an exudate of the thick, plastic type, show no shifting.

The shifting of a pleural effusion in different positions is well seen in the accompanying illustrations. The first (Fig. 1) is a diagram from

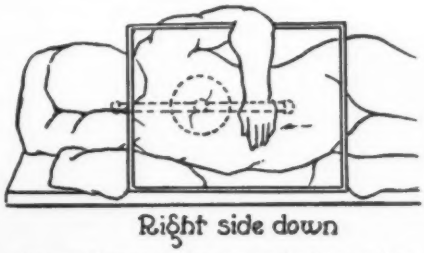

Fig. 2.—Diagram to show lateral decubitus position. The patient lies on the affected side with film in front and tube behind. The shoulders and hips are supported by cushions to permit the cassette to come down to the table top and thereby cover the inferior costal gutter with film. The upper arm extends over the cassette, helping to hold it in position.

tracings of roentgenograms in the upright supine, right decubitus and left lateral decubitus positions from a case of Hodgkin's disease, with bilateral pleural effusion. The tube is behind the patient. The lateral decubitus position is most advantageous. The second illustration (Fig. 2) shows one of the important features in the roentgenographic technic. In order to bring the film itself to the very outer margin of the chest wall on the inferior side, it is necessary to raise the patient above the level of the table by cushions under the shoulder and hip. In this way the cassette may drop an inch or two below the level of the patient's body and will rest on the table, with the patients' upper arm around it giving support. In this position 5 patients have been observed in whom fluid could be readily detected when it was entirely invisible in the usual upright or reclining positions.

Roentgenographing the patient with the affected side down allows a small collection of fluid, previously hidden in the posterior culdesac, to run up along the lateral chest wall, where the lung offers the least resistance.

Physical Therapy in Subacromial Bursitis

Dr. G. E. Deering, of Worcester, Mass., in *Phys. Therap.*, July, 1930, mentions five distinct stages or complications, all or some of which may occur in subacromial bursitis. These are: (1) the acute stage with adhesions forming; (2) the stage of contracting adhesions; (3) adhesions stretching; (4) muscular atrophy; (5) calcium carbonate and amorphous fat deposits in the bursa.

In the first stage, treatment begins with radiant

heat and light, followed by diathermy, each for 20 to 30 minutes. Vibratory massage, using the flat, padded vibratode between the fingers, follows. Effleurage may, however, be chosen and, in some very sensitive cases, massage had better be dispensed with altogether at first.

In the second stage, radiant light and heat and diathermy with massage have proved most efficacious.

In the third stage, radiant light and heat and diathermy are used, together with moderately forcible manipulation, as well as active, passive and resisted exercise, followed by vibratory massage.

For muscle atrophy, the electric currents that produce contraction of muscles are especially useful.

For cases in which bursal sac deposits occur, convective heat and conversive heat, in the form of diathermy, are always used, followed by chlorine ionization, manipulation and massage.

Radiation Therapy for Uterine Hemorrhage

Radiation therapy is an excellent remedy for benign uterine hemorrhage, due to fibromyomas or for the type classed as idiopathic.

In *Am. J. Surg.*, June, 1930, Dr. L. J. Friedman, of New York, states his preference for the x-rays. He employs deep, penetrating rays of 180 kv. peak and filtered by 0.5 mm. of copper and 1.0 mm. of aluminum. The target-to-skin distance is 50 cm. Fractional exposures are given twice weekly, until a full erythema dose is administered, usually completed within 3 weeks. In most patients, radiation is given through one portal 15 cm. in diameter, in the suprapubic region, and another through the sacral region.

Irradiation with radium involves hospitalization. The dose given varies from 250 to 2,000 mg.-hours or its equivalent in millicuries. Clinical experience has shown that 250 to 800 milligram- or millicurie-hours will produce a temporary amenorrhea which may last 2 to 6 months. The castration dose is two to three times greater.

Prevention of Diathermy Burns

As stated by Dr. R. Kovacs, of New York City, in *Physic. Therap.*, Aug., 1930, the prevention of diathermy burns depends on adoption of a careful general technic and on the observance of the following special rules.

1.—Before applying electrodes, inspect the parts to be treated carefully, to make sure that the continuity of the skin is nowhere broken and that the heat sensation of the patient is normal. In case of scar tissue, peripheral nerve injuries or hysterical anesthesia, be extremely careful in the application of diathermy.

2.—Before turning on the current from the main inlet, inform the patient that all the sensation he or she can expect is that of mild heat. Instruct the patient to report at once any uncomfortable faradic sensation, pricking or burning.

3.—After starting the current through the main switch, open up gradually, first the current regulator (rheostat) and then the spark gap. Only practical experience will teach how to manipulate this double control properly.

4.—Do not try to push the current up to the maximum amount of toleration during the first few treatments. Patients often are burned in their endeavor to show how much current they can stand. Remember the principle that a moderate amount of heat applied for a longer period is more effective than pushing up to the limit of tolerance for a shorter period.

5.—If at any time during the treatment the patient complains of an uncomfortable sensation anywhere, turn off your controls, shutting off the main current inlet in case of emergency and, if necessary, take off, inspect, and reapply the electrodes. When inspecting or adjusting electrodes, be sure that the current is turned off and increased gradually again after such a procedure.

6.—Do not leave the patient alone during treatment unless you have arranged that, by the simple pulling of a cord or the turning of a switch, he can turn off the current at any time. Watch the milliampere-meter during the entire treatment for an even flow of the current.

7.—At the end of the treatment, turn off the controls in the reverse order to that in which they have been turned on. This will leave all switches and controls in safe position for the starting of the next treatment.

Ultraviolet in Erysipelas

In *J. A. M. A.*, July 5, 1930, Drs. W. H. Ude and E. S. Platou, of Minneapolis, report that they have made a comprehensive analysis of all the available data in 402 hospitalized cases of erysipelas. These were classified according to the method of treatment and the data were so arranged that a fairly accurate comparison of the results could be made.

The methods of treatment in these cases were as follows: (a) Magnesium sulphate and glycerin packs; (b) roentgen irradiation; (c) ultraviolet irradiation; (d) erysipelas antitoxin; (e) roentgen irradiation and antitoxin; (f) ultraviolet irradiation and antitoxin.

The newer methods of treatment have reduced the mortality rate of erysipelas approximately 44 percent.

In cases treated by either roentgen or ultraviolet irradiation, the immediate results are exceedingly gratifying. The return to normal temperature and absence of symptoms takes place from three to four days earlier than in cases treated by the magnesium sulphate and glycerin pack method.

Ultraviolet irradiation produced a clinical arrest of the disease with the first treatment in 92 percent of our cases.

Irradiation and antitoxin therapy definitely reduce the total duration of the disease, as well as the average duration of the disease after the institution of treatment, and here also ultraviolet irradiation appears to give the best average results.

On the basis of this study, the authors conclude that the newer methods of treatment show distinct advantages over the older methods, and that the results obtained by either form of irradiation and by antitoxin are approximately

the same, with slightly more favorable results in the ultraviolet group.

They further conclude, on the basis of clinical experience with the newer methods of therapy, as well as on the basis of the present study, that the treatment of erysipelas by ultraviolet irradiation may be advocated as a universally applicable method: (a) It is readily available in practically all communities and is devoid of danger, as contrasted with roentgen irradiation and antitoxin; (b) it usually requires only one treatment, but the treatment may be repeated several times without the least danger; (c) it is inexpensive; (d) the results are somewhat better in our hands than those of any other method of therapy.

Ultraviolet Ray Dosages and Treatments

The spectral band between 3150 and 2800 Angström units has been referred to as the Dorno-ray region.

Summarizing the results of clinical experience with the energizing effects of the Dorno-rays and the analogies that can be drawn from studies of their vitamin activation and nutritional improvement, Dr. G. J. Warnshuis, of Cedarburg, Wis., in *Arch. Phys. Ther. & X-Ray Radium*, Oct., 1930, lays down the following principles:

1.—The amount of irradiation at each treatment is determined by the character of the clinical response to one erythema unit of radiation and subsequent increases, rather than by the degree of skin reaction in the individual subject.

2.—In the absence of insomnia, lack of clinical improvement and severe focal reactions, the intensity of radiation can be increased gradually to a maximum of five to eight erythema units.

3.—Two to three days should elapse between exposures.

4.—In cases that react well, four to five irradiations may suffice to bring about a restoration to normal intermediate metabolism.

5.—Most cases with symptoms of vitamin deficiency and suboxidation become stationary after a month of treatment, in so far as their response to ultraviolet radiation is concerned, and for practical purposes, treatment may be interrupted then until indications of a relapse appear.

New Method of Electrosurgery of Tonsils

In *Internat. J. Med. & Surg.*, Sept., 1930, Dr. L. L. Doane, of Butler, Pa., describes a new electrode for the electrosurgical treatment of the tonsils. A ring is made from the end of a Plank needle, attaching the shaft to one pole of a high-frequency machine, placing the ring around a tonsil to be coagulated and using this as the indifferent electrode, the active electrode —the needle—being placed within the ring and within the capsule.

Transmission of Ultraviolet Rays Through Animal Tissues

It is known that the transmission of ultraviolet rays through animal skins is very meager and decreases as the wave lengths become shorter. Some investigators have asserted that the transmission through living skin is better than through dead skin.

From recent experiments by Dr. T. Takahashi, of Cambridge, Eng., described in *Brit. J. Actinotherapy & Physiother.*, July, 1930, it has been determined that living rabbit skin which is thicker than 0.1 mm. can hardly transmit rays of wave-lengths shorter than 2,900 A.U. Fascia transmits the rays much more than skin.

With regard to the quantity of ultraviolet energy transmitted, the ratio of intensities of the transmitted and the incident ultraviolet rays is generally very minute. For the living skin of rabbits, thicker than 0.25 mm., the ratio varies from 1:1,900 to 1:48,000, as the wave length decreases from 3,650 to 3,025 A.U.

Removed human skin transmits relatively more ultraviolet rays than does that of rabbits. When, however, the tissue is thicker than 1 mm., it hardly transmits more than 1:1,000 to 1:20,000 part of incident rays of wavelengths between 3,650 and 3,130 A.U. The shortest wavelength transmitted through thickness of 1 mm. was 3,130 A.U.

The source of the rays in these experiments was the quartz-mercury lamp.

Physical Therapy in Chronic Rheumatism

The importance of the "shock" methods, and principally of physical therapy methods, is the most significant result of the modern physiopathologic conception of chronic rheumatism This disease being primarily a particular mode of disturbance of the neuro-endocrine-humoral system, it is the methods that act on that system which take first rank in the fight against it. Such are the injections of foreign proteins, of colloids, and of various "shock" chemical substances; and principally the methods of actinotherapy, thermotherapy, electrotherapy, balneotherapy, kinesitherapy and reflexo-therapy. Carbon arc and mercury-vapor irradiation treatment gave me far beter results than I had obtained from natural sunlight.

Actinotherapy in chronic rheumatism can be applied according to either of the following methods: (a) the method of actinic shock, combined with a local actinic revulsion; (b) the method of mild actinic stimulation, combined with local infrared applications. The latter method should be used in debilitated subjects, in those who do not show a very good condition of their cardiovascular, respiratory and nervous systems, and in those who have a subacute or very painful condition.—Dr. A. P. Cawadias, in *Brit. J. Actinother. & Physiother.*, August, 1930.

THE SEMINAR

CONDUCTED BY
MAX THOREK, M.D. (*Surgery*)
GEORGE B. LAKE, M.D. (*Medicine, Ethics and Economics*)

[NOTE: Our readers are cordially invited to submit fully worked up problems to the *Seminar* and to take part in the discussion of any or all problems submitted.

Discussions should reach this office *not later* than the 1st of the month following the appearance of the problem.

Address all communications intended for this department to *The Seminar*, care CLINICAL MEDICINE AND SURGERY, North Chicago, Ill.]

PROBLEM NO. 3 (MEDICAL)

Submitted by Dr. R. A. Hills, Russell, Ia.
(See CLIN. MED. AND SURG., March, 1931, p. 204)

Recapitulation: The patient was a man 54 years old, with a negative family and personal history, except that he was a heavy user of alcohol.

On Dec. 3 and 6 he fell in the street; on the first occasion he lost consciousness for a few minutes. His physical findings were normal at this time; Wassermann test, twice negative.

On Dec. 8 he fell and had a severe convulsion, after which he was unconscious until his death, six days later. A spinal puncture revealed clear fluid containing a few red blood cells. The treatment applied did no good.

Requirements: Suggest diagnosis and treatment.

DISCUSSION BY
DR. EMIL C. JUNGER, SOLDIER, IA.

The patient in this problem is just another boozer, with alcoholic brain changes that cause small hemorrhages, and when these are in a locality where they disturb function, the patient becomes dizzy, unconscious, "crazy" or paralyzed or dies, which latter outcome is best for all concerned.

There is no treatment for these cases. They do not know much (or, at least, do not act as if they did) before they have the stroke, and, if they live, know less afterwards.

If the patient is plethoric, venesection and catharsis may lower the blood pressure and lessen the amount of bleeding in the sclerosed brain; but the vacuum produced in the skull by the contracting brain is being abolished by Nature (who abhors a vacuum), by letting in a little blood.

SOLUTION BY DR. HILLS

An autopsy, performed at Rochester, Minn., was followed by a diagnosis of presenile psychosis, with areas of softening over the frontal lobes of the brain. All other organs were normal.

CLOSING DISCUSSION BY
DR. GEO. B. LAKE, CHICAGO

The history of this case is decidedly inadequate for making a truly satisfactory diagnosis. We should know whether there were any paralyses or other signs of nerve involvement between the first and the last (fatal) attack; also the condition of the fundus oculi and a number of other matters.

Dr. Junger's discussion expresses a line of thought which is, unfortunately, too common among physicians. Many a man has died from cerebral tumor or hemorrhage, encephalitis, diabetes, uremia, fracture of the skull or other conditions, because his medical attendant, finding him comatose and, either knowing that he had a history of alcoholism or smelling what he believed to be alcohol on his breath, has

said, "Just another boozer," and has left him to "sleep it off."

It is possible that alcohol played a part in the death of this patient, but he was obviously *not* suffering from acute alcoholic intoxication at this time and the finding, at autopsy, that all organs except the brain were normal is not consistent with such a theory. We can, moreover, rule out the acute inflammatory diseases of the brain and meninges and also traumatism. The presence of syphilis is *not excluded*, even by two negative blood Wassermann tests, and we have no report of such a test on the spinal fluid.

The diagnosis lies, for practical purposes, between: syphilis; embolism or thrombosis ("softening"); tumor; abscess; and hemorrhage of the brain, and the history is not sufficiently complete to make the differentiation possible.

The treatment would, of course, depend upon the diagnosis. If syphilis could be demonstrated, the treatment would be obvious and the prognosis encouraging. In tumor, abscess and hemorrhage, something might be accomplished, in some cases, by surgical intervention. Venesection was *not* indicated here, as the blood pressure is reported as normal. One does not see what Dr. Hills hoped to gain by the intravenous use of salt solution and dextrose. In general, *complete rest* and symptomatic care are the main features in the treatment of these brain cases.

This problem again illustrates the necessity for obtaining and reporting a *complete* clinical and laboratory study of every obscure case that is to be considered by others. In this instance we have only two signs to guide us—convulsions and coma. A sound diagnosis cannot be made upon such meager data.

Problem No. 5 (Ethics)

Submitted by Dr. E. M. Cunningham, Cassopolis, Mich.

A widely known physician and specialist, from a clinic of international renown, recently made an address before a convention of optometrists.

Optometrists are, as a rule, very active advertisers, frequently stressing the point that they "use no harmful drops or drugs" in examining the eyes.

Requirement: Is it strictly ethical for a prominent physician to identify himself in this manner with such a group of people?

Vivisection

When will the anti-vivisectionists realize that when they are asking for total prohibition of experiments on living animals they are asking for what it is impossible to grant them? Pasteur's vaccination against rabies has reduced the mortality in this terrible disease to a minimum and Behring's anti-diphtheric serum saves the lives of over a hundred thousand children every year. Are not these two facts alone sufficient to make these well-meaning lovers of animals understand that discoverers of new worlds, like Pasteur, of new remedies against hitherto incurable diseases, like Koch, Ehrlich and Behring, must be left to pursue their researches unhampered by restrictions and undisturbed by interference from outsiders?—Dr. Axel Munthe.

Vegetarianism

Vegetarianism is harmless enough, although it is apt to fill a man with wind and self-righteousness; but it is not a mode of diet for all. It is especially unsuitable for growing children and for sedentary workers.—Dr. Robert Hutchinson.

THE CLINIC

SURGERY

Appendicitis: Diagnosis and Treatment

By CLIFFORD U. COLLINS, M.D., F.A.C.S., *Peoria, Ill.*

IT IS not necessary for the general practitioner to try to make an exact diagnosis in an abdominal condition. If he concludes that the trouble requires surgical treatment, this is all that is necessary, as was pointed out by Kanavel some years ago. When the general practitioner decides that the patient needs surgical treatment, it is his duty to put the patient in the care of a surgeon as soon as possible. The conscientious surgeon must then decide if he agrees that the patient needs surgical treatment. He should also make as exact a diagnosis as he can, and use his best judgment as to the necessary treatment.

Volumes have been written concerning appendicitis and the other abdominal conditions that simulate it. It is impossible in one short discussion to cover them all.

URETERITIS AND PYELITIS

One of the troubles that might be mistaken for appendicitis is a right ureteritis or pyelitis, with or without a stone. The following case illustrates the point.

T. T., aged 19 years, had a sudden attack of pain in the right lower abdomen on June 27, 1927, at 7:00 A.M. He vomited. He still had the pain on June 28, but no fever. On June 29, he had a temperature of 99°F.; pulse 80. He had had four similar attacks in the previous year. His physician brought him to the hospital on June 29, at 10:00 A.M., fifty-one hours after the beginning of the attack, with a diagnosis of appendicitis.

He was somewhat tender on pressure over McBurney's point, but his point of greatest tenderness was at the end of the tenth right rib. When he had an attack of pain, his urine burned him when it passed through the urethra, but the pain did not radiate to the penis or testicle. The white blood count was 9,600 and the urine showed 15 red blood cells to the one-sixth objective field.

On June 30, an x-ray study of the right urinary organs failed to show a stone. His kidney function was 65 percent; and by that time the white blood count had risen to 13,600. In view of the findings, a diagnosis was made of infection of the right kidney and ureter, and no operation was done. He left the hospital on July 6, and on July 21 his urine was normal.

A white blood count should be made and the urine examined microscopically in every patient suspected of having appendicitis. Some surgeons say that the white blood count may be misleading at times, and no attention should be paid to it. It may be misleading, occasionally, but in the majority of patients it will give valuable information, if correctly interpreted. The microscopic examination of the urine may spare the surgeon from the humiliation of removing a normal appendix. It should be borne in mind that *a patient may have pyelitis and appendicitis at the same time.*

COMBINED INFECTION

R. T. McD., aged 23 years, was taken with a sharp pain in the left abdomen on June 9, 1929, at 10:00 P.M. He was not

nauseated and did not vomit. On the morning of June 10, he started to work but at 6:30 A.M. he had a sudden attack of pain over the entire abdomen. He vomited several times that day. In the evening the pain had localized in the right lower abdomen. He had had two similar attacks. His physician brought him to the hospital fifteen hours after the beginning of the attack, with a diagnosis of appendicitis. His temperature was 101.4°F., taken per rectum; pulse 110. His white blood count was 15,600 and the microscopic examination of the urine showed 100 pus cells per one-sixth objective field. He was definitely tender on pressure over McBurney's point, but there was no tenderness on pressure over any other portion of the abdomen. The diagnosis was made that he had appendicitis, in addition to the urinary tract infection, and an immediate removal of the appendix was advised and accepted.

When the peritoneum was incised, cloudy fluid escaped, and the appendix gave ample evidence of acute inflammation. The mucous membrane was a dark mahogany color and at one point was an ulcer just ready to perforate. His recovery was uneventful. It should be noted that the physician brought the patient to the hospital and the surgeon in ample time for a diagnosis to be made and for the appendix to be removed before it had become perforated.

Dangers of Delay

On April 3, 1930, E. G., aged 27 years, was brought to the hospital at 3:00 P.M. The history showed that on April 1, at 8:00 P.M., he developed a "misery" across his lower abdomen and vomited. He became tender across the lower abdomen. After a few hours the pain and tenderness localized in the right lower quadrant. His physician saw him that night, and on April 2 and 3. He vomited again on April 2, but not on April 3.

He felt better on April 2, and at 3:00 o'clock on the morning of April 3, he took a big dose of salts. The pain became much worse six hours afterwards, or at nine o'clock. This was thirty-seven hours after the beginning of the attack. Then his physician sent him to the hospital. His abdomen was distended and tympanitic: temperature 100.8°F. pulse 96; and respiration 36. A diagnosis was made of a perforated appendix with general peritonitis.

My experience had taught me not to operate on a patient with general peritonitis and a distended abdomen. He was placed on the treatment advocated by the late Dr. A. J. Ochsner for such a condition. His abdomen remained distended, his temperature ranged around 102°F., and his pulse rate around 130. He became delirious; his pulse was weak and rapid; his extremities became cold; and he died on April 8, at 7:30 P.M., practically seven days from the beginning of the appendicitis.

This subject is an old one and many articles have been written concerning it. It would seem as if the correct and most efficient treatment should be established in the minds of the laity and the medical profession by this time, but a recent statement by Dr. Andy Hall, Director of Public Health for the State of Illinois, shows that this assumption is not well founded. Dr. Hall reports that the number of deaths in the State of Illinois attributed to appendicitis, in 1929, was 1298, or a death rate from this cause of 17.4 per 100,000 population. The number of deaths was about equally divided between Chicago and the remainder of the state (there were 652 deaths in Chicago and 646 down-state).

The significant part of Dr. Hall's report —the part that prompted this discussion— is that the deaths, in Illinois, from appendicitis in 1929 were 483 more than those from the same cause in 1918, and the rate per 100,000 was 36 percent higher in 1929 than in 1918. In spite of all that has been learned about appendicitis, and all the discussions concerning it in the last eleven years, *the death rate per* 100,000 *has increased* 36 *percent.*

It is well known among surgeons that the mortality due to appendicitis is relatively very low, if the appendix is removed before it becomes perforated, and that this usually occurs about thirty-six hours after the beginning of the attack. The deaths reported as due to appendicitis are really caused by peritonitis; and peritonitis rarely follows appendicitis unless the wall of the appendix becomes perforated by ulceration or gangrene.

Avoiding Errors

It has been said that, when a patient dies of appendicitis, there has usually been a mistake made by the patient, a member of his family or the attending physician. Some mistake, through ignorance or lack of judgment, has prevented the removal of the in-

flamed appendix within thirty-six hours, or before the organ has become perforated. Why do these errors occur and how may they be avoided?

It is very important to get the exact hour of the beginning of the attack. The patient should be asked if he felt well before the time he sets as the beginning of the symptoms. Acute appendicitis usually begins suddenly and the pain increases in severity. If not questioned closely, the patient may speak of an exacerbation of the pain as the beginning of the attack, and the physician may thus be led into a mistake as to the time perforation may be expected.

The temperature should always be taken *with the thermometer in the rectum.* Allowance should be made for the fact that the rectal temperature is one degree higher than the temperature taken under the tongue. A drink of cold water or breathing through the mouth may prevent the recording of the correct temperature by the thermometer under the tongue. As one degree of temperature above normal is important in appendicitis, it is necessary that the thermometer be placed in the rectum, where the recording of the temperature will be exact.

It is the duty and responsibility of the attending physician to make his diagnosis and get the patient under the care of a surgeon in time to have the appendix removed before it has become perforated, or before thirty-six hours have elapsed. This requires rather fast work.

It is not sufficient for the physician to see the patient one day and then not see him again until the next day. He may see the patient in the morning of the first day, and then circumstances may prevent his call till the evening of the second day, and by that time too much valuable time is lost. He should know the patient's condition, including the temperature and pulse, at least every six hours from the beginning of the attack. No cathartic should be given a patient suspected of having appendicitis.

In the case last presented, two errors were made: A large dose of salts was given, which caused a wave of fecal matter and gas to be propelled by peristalsis down the small intestine to the appendix and against its wall, weakened by ulceration, thus helping to cause the perforation; also too much time was lost before the patient was brought to the hospital. If the high mortality rate in appendicitis is to be lowered, such gross errors must be avoided.

427 Jefferson Bldg.

Periodic Health Examinations

No candidate for a health examination belongs in a doctor's office in the midst of a crowded office hour. This is a type of service that can and should be made by appointment; that should be given unhurried and with care; and deserves a fee commensurate with the amount of time consumed.

In the whole movement for periodic health examinations, the specialist so far (except the practitioner) has taken no part whatever. Would it perhaps not be wiser to develop a new form of practitioner who will limit himself to giving health examinations? Could not such a specialist perform this service better than a general practitioner?—Dr. O. H. Leber, *in* M. J. & Record, Oct. 1, 1930.

Fee-Splitting

Fee-splitting, a cancer in our profession, will be cured by the remedy of moderate fees; and the public, which is, collectively, the patient, will be benefited, while the family doctor will again come into his own and hold in the American heart and home the place he deserves.—Dr. G. F. Chandler, *Kingston, N. Y., in* New York St. J. Med., *Sept. 15,* 1930.

CLINICAL NOTES AND PRACTICAL SUGGESTIONS

The Physician and the Public*

A PRINCETON professor tried to characterize what he called medical opinion by saying that it was always individualistic. Each experience of each physician was an individual experience. When physicians considered that they were thinking collectively, the group opinion was like a bundle of sticks—an assembling of individual opinions based on individual experiences.

We are so accustomed to thinking of the physician as being an individualist that most of us accepted this statement without question. I presume it is correct. But it is not peculiar to physicians and their opinions. It is true of popular opinion—of laymen's concepts. The blind man reconstructs his elephant from the part he feels. The layman's conception of medicine is the result of the glasses through which he looks at the matter. Those glasses are his individual experience, his gossip, his reading and his emotional reaction. We can say of the layman's conception of medicine, as the Princeton professor said of medical opinion, that it is not a mass conception, nor a majority one, and that there is no machinery in society either for ascertaining what this conception is, nor for registering it, nor for translating it into a going concern.

This is an iconoclastic age. Men are disrespectful of authority in every line. They are disobedient of governmental authority and distrustful of individuals who are regarded as superior. The old-time physician was regarded as a prophet and his utterances were accepted in something of the spirit in which men accepted the word of the prophet. The present-day man of the street is critical of Medicine and medical men. This change of attitude is about on a par with the change in other fields.

There is no cohesiveness of public opinion, so long as that opinion is rational. Whenever public opinion becomes active it is because of emotions. Emotions supply the cohesive quality and motivate the action, whatever it may be. The medical situation is in more than the usual state of hazard because, in this inconoclastic period, there are rather unusual possibilities that emotional appeal may cement laymen's opinions together and motivate them.

There is no danger from the "anti" groups. The members of these groups are anti-minded and, being so, can never unite nor stay long united on any program. Success and experience create conditions that cause the group to disintegrate. They can supply the emotions as fuel, but they cannot supply the generalship or organization necessary when any movement is to threaten the security of Medicine. However, there are anti-medical groups that are emotionless, cold, shrewd, and organized on a monarchical basis. The thinking is done by one person; the followers obey orders blindly. They know how to play on the emotions of the masses. The Christian Scientist group is the best illustration of a monarchical political organization, with blind obedience from its followers, functioning in the midst of a democracy. They are anti-medical.

Let me make plain my conception of the degree of hazard. Since the beginning of society there has been a Medicine. During periods it has been somewhat obscured, but

*Author's abstract of a talk before the Medical Round Table of Chicago.

it has always survived. During periods it has been driven from favored countries and has had to find sanctuary in less desirable regions. There are many instances of this in history. But in no instance has the existence of Medicine been threatened. When the storm has passed it has always found the rock of Medicine firm, solid and enduring—one of the foundation stones of the social structure.

If this spirit of evolution, unrest and disrespect of the established should be motivated by emotion, and all under shrewd direction, there might result anti-medical activities which would temporarily embarrass and make difficult the practice of medicine, both preventive and curative. There is no possibility that Medicine, in its essentials, would be seriously threatened, or that the embarrassment would be long continued. Medicine as a fundamental of society will continue, Gibraltar-like, until such time as the whole structure collapses.

I think that, in the background of the mind of the man on the street, there is a conception of Medicine, one that the man senses but does not frame into thought except in unusual instances. It is that Medicine is a structure built out of social experience and maintained by society, for the purpose of protecting the members thereof against every enemy which threatens life and health, physical and mental, bodily vigor, so much of comfort as is related to the physical and mental—which threatens racial endurance and wellbeing. As I have said, this is not an organized thought or conception. But I am sure it is sensed. In this conception there is no line drawn between curative and preventive medicine. *Protection* is what is desired.

The medical men of today are entrusted with the care of the institution, Medicine. It has been so since Aesculapius organized a machinery which, later, Hippocrates perfected. It will be wisdom on the part of medical men, now the caretakers of Medicine, if they will accept this concept of Medicine, even though it is not organized, has no cohesiveness, is without emotional urge and sagacious direction. If they will build on this plan, the opposition can never successfully organize or supply the emotional urge needed for action. Security and protection against hazard lie in their accepting this health program in its entirety and having it fashion their opinion and direct their action.

W. A. Evans, M.D.,
Chicago, Ill.

Dentifrices

THE sole purpose of a dentifrice is to aid pleasantly and harmlessly in the daily cleansing of the teeth. All that is needed for most people is a simple, bland substance to aid in making the actual brushing more effective.

The Council on Dental Therapeutics will accept dentifrices for inclusion in the list of "Accepted Non-official Dental Remedies" provided:

1.—Claims are strictly limited as to their efficacy as an aid in hygiene of the oral cavity, and particularly to their mechanical cleansing properties.

2.—No unwarranted therapeutic, chemical or bacteriologic claims are made or inferred in their presentation.

3.—Therapeutically suggestive names are not used as a brand name.

4.—The brand name is not indicative of a component which does not possess proven therapeutic properties.—W. Hyde, D.D.S., of Minneapolis, in *J. Am. Dent. A.*, March, 1931.

Cinchona Tercentenary

THE Cinchona Tercentenary Celebration has been organized by The Wellcome Historical Medical Museum, to mark the first recognized use of cinchona bark by Europeans in 1630.

An extensive collection of exhibits has been arranged to illustrate the romantic history of this remarkable remedial agent, the addition of which to the world's materia medica has, for three hundred years, proved itself to be of incalculable value, especially in tropical regions. The lives of untold millions have been saved by the use of cinchona bark and its active principles.

From the time when the therapeutic properties of cinchona bark, also known as Peruvian bark, became known to the Old World, until, and since, the scientific researches which resulted in the discovery of quinine and other active constituents of the bark by Pelletier and Caventou (in 1820) and others, there have occurred many interesting phases in the history of Cinchona.

Linked up with the history of cinchona bark are the pioneer exploring expeditions by the venturesome Spaniards in South America, its introduction to all parts of the world, especially by Jesuit missionaries, and also the later research expeditions of French, Spanish, British and other scientific investigators.

This Exhibition illustrates in outline the historical development from the time of the introduction of the bark until today, when experimental researches on its active principles are still being continued.

The therapeutic properties of the cinchona bark are believed to have been well known to the native Indians of Peru, who confided their knowledge to the Jesuit missionaries when they established missions in the country after the conquest by Pizarro in 1527.

William Arrot, a Scotch surgeon, who visited Peru in the early part of the eighteenth century, states that the opinion then current at Loxa was that the qualities and the use of the cinchona bark were known to the Indians before any Spaniards came among them.

La Condamine, as well as Jussieu, heard the same statements, which are supported by Anton Bollus, who lived in Peru in 1649, and these statements were generally prevalent at the close of the 17th century.

As regards the first actual medicinal use of cinchona bark in 1630, there are statements by distinguished authorities that, when Don Juan Lopez de Canizares, the Spanish corregidor of Loxa in Ecuador, then a province of Peru, was taken ill with an intermittent fever he was cured by an Indian cacique of Malacotos, who revealed to him the curative properties of the bark and the proper way to administer it.

The Jesuits soon afterwards despatched supplies of the cinchona bark to Spain. Rompel states: "For the earliest transportation of the bark we must thank the Jesuit Barnabe de Cobo (1582-1656), who . . . in his capacity of Procurator of the Peruvian Province of the Order, brought the bark from Lima to Spain . . . and Rome in 1632."

In 1621, Don Luis Geronimo Fernandez de Cabrera y Bobadilla, fourth Count of Chinchon, married Ana de Osorio. Some time after her death he married his second wife, Francisca Henriquez de Riberia, in 1628. In the same year Count Chinchon was appointed Viceroy of Peru; and soon after, he and the Vice-reine proceeded to Peru to take up their duties. It is quite certain that Ana de Osorio, Count Chinchon's first wife, never visited Peru, therefore any reference to the Countess of Chinchon in connection with the history of cinchona must definitely signify the Vice-reine, Francisca Henriquez de Riberia, the second wife of the fourth Count of Chinchon.

The original records prove that both the Count and Countess of Chinchon suffered severely from fever; and they also indicate that, in 1638, the Court Physician, Dr. Juan de Vega, cured the Countess of this malady by the administration of cinchona bark at Lima, the capital of Peru.

The Vice-reine died, and was buried in 1641 at Carthagena in Colombia, then a Province of Peru.

The distinguishing botanical name of the Genus *Cinchona* was invented by Linnæus. This title was suggested by the titular name "Chinchon" of the Countess Francisca Henriquez de Riberia, the Vice-reine, and second wife of the Viceroy of Peru.

In 1740, Linnæus made his first reference to the Peruvian bark as *Quinquina Cond.*, and in 1742 he invented the word *Cinchona* for the Genus ("*Quinquina Condamin. Act. Gall.*, 1738").

The native Peruvian Indian names quinaquina, quinquina, kinkina, or kinakina, in use until Linnæus invented the name *Cinchona*, have been derived from the Quichua and other native Indian languages of Peru. Markham states that: "In Quichua, when the name of a plant is re-duplicated it almost invariably implies that it possesses some medicinal qualities."

Both the native Indian and generic words have formed the root-stems for the designations, not only of the bark, but for its derivative constituents.

The cinchona tree was introduced into India in the last century by the late Sir Clements Markham, and into Java by Dutch scientists. Unfortunately, the ancient cinchona forests of South America have for some time lost their supremacy; and today, the main supplies of the bark come from Java.

Dr. Wellcome, the Founder and Director of the Historical Medical Museum, visited the indigenous South American cinchona forests in 1879, to investigate and study the methods employed in stripping, preparing, drying and packing the cinchona bark

for transport, also to study the conditions under which these operations were being carried out.

He gave special consideration and attention to the practicability of reforestation, and scientific methods by which plantations could be established for the cultivation of the highest grades of cinchona trees on the sites of the ancient indigenous forests which had been devastated by the destructive methods then practised in gathering the bark. Unfortunately, no effective measures have been taken to protect and conserve the cinchona trees in the principal native forests, with the result that the bark-producing countries of South America have lost their world-wide market, and substantial revenue.

The organization of the Exhibition in connection with the Cinchona Tercentenary Celebration has been made possible by the cordial assistance and willing cooperation of scientists and learned societies in various parts of the world.

Since 1820 cinchona bark has yielded quinine and other active medicinal principles which have been adopted by the pharmacopœias of the world.

The Exhibition will remain open from Monday, December 8, 1930, until February, 1931.

L. W. G. MARKHAM, M.Sc., F.R.S.E.
London, Eng. *Conservator.*

A New Method of Killing Poison Ivy

THE New York Department of Health reprints in its *Health News* the following article describing a method of killing poison ivy, from the September 6 issue of *The Rural New Yorker*. In view of the fact that the plant is so difficult to destroy without running a risk of being seriously poisoned, this apparently effective procedure, which is both simple and cheap, seems well worth trying:

The material used is *calcium chlorate*, not calcium chloride or chloride of lime as some have thought. It costs, in 50-pound lots, about 11½ cents per pound. Smaller quantities are more expensive, but so little is required that the cost for the area treated is trifling.

The principle on which it works is that the *chloric* acid penetrates the tissues of the plant, gets into the sap and disorganizes growth.

As used dry, it is dusted on lightly, when the leaves are damp with dew or rain, so that it will not slide off. Its affinity for moisture from the air is so great that very soon the white dust disappears, and drops of moisture take its place.

As a spray, one pound is enough for from one to two gallons of water. Weaker solutions may work, but this should be tried, as plants differ in resistance at times. A forcible spray is better than a mere sprinkling.

It acts quickly. In two days the leaves will be withered, and its work goes on until the stem is shriveled and the whole plant apparently dead.—*Military Surgeon.*

Recreation

A *WISE* person has said, "Health is like money. If you have a lot you are all right. And if you haven't any, you can resign yourself to that. But if you don't know what you can spend, and each expense is devastating, you are in a bad way."

This problem of determining how much health we can spend and how to spend it is one of the serious aspects of recreation, interpreted in its original meaning of re-creation. Before we can spend money we must earn it. In the same way, before we can spend health, we must earn it.

The more thoroughly our existence becomes mechanized, the more insistently do we stress the need to develop vocational and creative abilities peculiar to each individual. It is a sort of safeguard for the soul, oppressed as it is by push-buttons, levers and mass production.

As a result of this trend toward individualization in the things of the mind and the spirit, the field of recreation has broadened in scope and in purpose, and now the accent is placed on how we grow through recreation rather than on what we do with it. Nearly every recreation leader knows the old guard who do nothing but play basketball year in and year out. Perhaps each player develops a quicker hand or foot or eye as the basketball seasons roll by, but what happens in the growth of his interests? Sooner or later the peak of the players' physical development will be reached, and then comes the down grade. They are left with few recreational resources.

A man, whose whole physical training through college had been planned to make

him one of the finest stroke oarsmen on any crew stated, years after the glamour of victory had faded, that it "wasn't worth it." "If I had it to do again," he said, "I'd have been interested in lots of other things that would be of some use to me now." He had earned, by sacrifice and labor, the hard muscles that brought his boat to victory; but he had spent all his energy on one thing, and then had to start over again, just as though he had spent all his money for "gold bricks."

It is possible, however, to spend one's recreational interest in one place and yet have it grow. The story is told of a group of women who made baskets year after year. Then they began to look into the history of basket-making and of basket designs. They became national authorities on Indian basketry, ancient and modern. They began to make their own designs Each year these women developed new resources and skills in the same field.

But in the more violent fields of recreation, how are we to audit our health books, and know exactly how much energy we can spend without exhausting our principal? It is now recognized that a person with a limitation, such as a heart murmur or a stiff knee, can be perfectly normal *within his limitations.* He may enjoy life, "earn" his health and spend it, in exactly the same way as other people, up to the extent of his limitation. If a man finds that a walk of eight blocks makes him breathless, let him walk four blocks. For four blocks he can walk as swiftly and as profitably as anyone. There is no reason for him to give up walking altogether. There is every reason for him to develop himself as normally as possible within his limits.

AIDA DE COSTA BRECKENRIDGE,
New York City.

Ferrán and the Tubercle Bacillus

AN *EDITORIAL* in the issue of CLIN. MED. AND SURG. for January, 1931, credits Calmette with the discovery that the tubercle bacillus has a life cycle. As a matter of fact, the real discoverer of this biologic truth was a Spaniard, not a Frenchman.

In 1897 Dr. Jaime Ferrán y Clua, of Barcelona, presented before the Academy of Biological Sciences, in Paris, a paper in which he demonstrated two things: first, that the bacillus of Koch was not the only germ generator of tuberculosis; second, that this bacillus is the end of a natural evolution of a non-acid-fast organism. These new bacteria isolated by Ferrán may be found in tubercle cavities, sputum, cerebrospinal fluid, urinary sediments, in any acute inflammatory tuberculous process and in the feces of those affected with chronic constipation.

The best medium used for the isolation of these bacteria is agar—the same that is used for coli-typhic group—and, if a liquid medium is employed, slightly alkaline bouillon is preferable.

Aniline dye is used for staining the smears.

Other data about the same bacteria are: non-acid-fast; they possess movements; they cause entire turbidity of the broth.

Several species, races or varieties of bacteria found in hemorrhagic septicemia bring into existence, by mutation *in vivo*, new species of bacteria. The former are called by Ferrán, *Alpha*. The cycle of evolution is as follows:

Alpha: Non-acid-fast; sapro-phytic; atoxic.

Ascending:

- *Beta*: Acid-fast bacteria; moderately virulent; saprophytic; mutation takes place *in vivo* from *Alpha*.
- *Gamma*: Acid-fast; tuberculogenic; virulent; this is the *true Koch's B.*

Gamma or Koch's Bacillus.

Descending:

- *Delta*: Acid-fast; emulsionable; moderately virulent; regressive mutation from Koch's B.
- *Epsilon*: Non-acid-fast; analogous to *Alpha; transmutable in vivo* into Koch's B.

The mixture of *Alpha* and *Epsilon* (analogous bacteria) is used in the preparation of *anti-alpha vaccine*, for immunization against and therapy of tuberculosis.

In 1897, Calmette was the strongest opposer to Ferrán's "heterodoxy." Ferrán died on November 22, 1929. Calmette, in 1930—thirty-three years after Ferrán's communication to the Academy of Sciences of Paris—admits that: "The bacillus discovered by Koch in 1882 is *only one of the states of evolution* of the tuberculous virus."

MIGUEL M. DOMINGUEZ, M.D.
San Benito, Tex.

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[The name of Calmette is associated, in the minds of most American readers, with the most modern ideas regarding the organism of tuberculosis and, so far as we are able to ascertain, the reports of Ferrán's researches have not appeared in English. There are, however, a number of reports

in French, covering the period from 1898 to 1913, which substantiate this report by Dr. Dominguez.

We are happy to be able to set ourselves and our readers right on this matter and to give credit where it is due.—ED.]

Intravenous Injections of Dark Solutions

PHYSICIANS sometimes complain that they would frequently like to inject, intravenously, certain dark-colored solutions, such as Colloidal Mercury Sulphide-Hille, but hesitate to do so because the color of the medicament prevents them from seeing whether or not blood flows back into the syringe after the puncture, and therefore they do not feel sure that the vein has been properly entered.

The new "B-D Yale" intravenous syringe (all-glass) will obviate this difficulty, as it has a long and large needle tip, in the bore of which an ampulla is blown, into which the blood can readily be drawn, without entering the syringe and mixing with the dark fluid. Such an arrangement offers several other advantages besides that of visibility of the aspirated blood.

GEORGE B. LAKE, M.D.,

Chicago.

Lawyers and Doctors*

THE legal and medical professions are perhaps the most important on earth. From the time of the ancient Greeks and Romans, law and medicine have concerned the best minds. Law, we believe, was far in advance of medicine in ancient times. Its principles were better defined and its practice abler. This was true when our republic was founded a hundred and fifty years ago. The science of government was far in the lead of the science of health.

But how is it now?

Medicine and surgery have advanced with prodigious strides, even in the last fifty years, until their wonders compel the admiration of all mankind. They have kept pace with all the sciences, and are constantly adding new wonders of achievement. Our nation's death rate, for instance, has been halved in thirty years. Diphtheria and typhoid have been cut 95 percent. Many plagues and pests have been all but utterly destroyed. Modern hospitals and treatment of the sick have become all but miraculous, with a benefit to mankind beyond computation. The medical profession today, in its operation, is superior to any other profession. Its spirit is that of progress. It attracts the best brains in the most civilized populations. Its methods and administration are a constant source of congratulation. In the World War it saved thousands of lives. It is said that its charges are too high. But are they higher than those of the legal profession, when service rendered is considered?

Has the profession of law improved during the past fifty years? Are courts of law more efficient? The medical profession is alive. It constantly improves its service. Can this be said truthfully of the courts of law? We think not. Has there been a single advance in court procedure since 1880? Possibly so. But to the outsider the same verbosity seems to cloud it, the same continuances and delays hobble it, and the same impediments to justice seem to retard it.

Are medical men intellectually superior to lawyers? If not, why do medicine and surgery make such notable advancement in methods, efficiency and prompt service, while the legal profession stumbles along without visible improvement? Has any process of law been shortened, or any court been spurred to increased efficiency during the present generation?

I am not prejudiced against the legal profession. My father was a lawyer and during his best decades a judge. But delay to the eleventh hour, costly delay, seems to be the outstanding feature of the legal profession. Why has it not improved its methods? It has an army of officials, paid by the people to expedite justice. Is that the reason? or has the lethargy of the profession made it incapable of reforming itself?

W. G. SIBLEY,

Chicago.

*From *Journal of Commerce.*

Impetigo Contagiosa

SOMETIMES, when treating impetigo contagiosa, the lesions do not disappear so quickly as one wishes or expects, the failure being attributed to the medicament employed. In many cases this prolongation of the disease is due to the fact that the crusts or scabs are not removed before applying the medication.

The following is an efficacious method for removing scabs:

Mix two tablespoonfuls of wheat starch and one teaspoonful of boric acid crystals into a cream with cold water. Add to the cream a pint of boiling water, and stir. Allow the starch jelly to cool a little, and then spread thickly on clean gauze or linen and apply to the crusted parts with a bandage.

The starch poultice *must never be applied for longer than one hour,* and when removed the scabs come off with the dressing. This may be repeated if required.

All ointments and lotions act better after a starch poultice.

R. STEWART MACARTHUR, M.D.,
Los Angeles, Cal.

Indications for Blood Chemical Tests

A *FULL* blood chemical examination is a needless expense, unless there are specific indications for each test.

Order blood sugar determinations in cases only of, diabetes or suggestive subjective symptoms, with obesity, arteriosclerosis or gall-bladder disease. Suspected hypoglycemia is also an indication for the test.

A sugar tolerance test is unnecessary when the fasting blood-sugar is above 0.15 percent.

Order an estimation of the CO_2 combining power of plasma (or when this is not feasible use some of the indirect tests: Ketone acids; tolerance to alkalies; CO_2 of alveolar air; alkaline urine; tolerance to acids), in:

1.—Diabetic patients with much diacetic acid in the urine.

2.—Uremic patients with much nitrogen retention.

3.—Patients who are receiving large doses of alkali and showing toxic symptoms.

4.—Tetany of all types.

5.—Patients showing severe toxic symptoms associated with marked disturbance of gastrointestinal motility, such as occurs in protracted vomiting, peritonitis, distension or probable intestinal obstruction. Blood-urea and blood-chloride estimations are also of value in acute disturbance of the gastrointestinal motility with toxemia.

Except in an emergency, never ask for a blood-urea estimation when the phenolsulphonephthalein test is normal. Determine the phenolsulphonephthalein first.

Never ask for both a blood-urea and nonprotein nitrogen; they have the same significance.

Do not ask for a blood-creatinine unless the urea nitrogen is over 30. It should then be done as a routine.

Order uric acid tests only in cases of gout or suspected gout. Renal impairment detracts from its diagnostic value.

Order icterus index only in cases of jaundice and anemia.

Ask for blood-calcium determinations only in tetany of unknown origin.

Order inorganic phosphorus tests if practicable, in cases only of rickets or infantile tetany.

Ask for a blood-cholesterol estimation only to confirm a diagnosis of nephrosis or to determine the severity of diabetes. Rule out other states in which it is increased.—From "Laboratory Medicine," by DR. DANIEL NICHOLSON.

Free Vaccines

The "filler" by Dr. Emmet Keating, on page 115 of the February, 1931, CLINICAL MEDICINE AND SURGERY, strikes me as being ridiculous—not to say asinine. Does the doctor never receive a garage bill reading, "Parts, $.....; Labor, $....."? Should we, because we are doctors, be "above" the mechanic and offer our services gratis whenever the medicine is free?

J. G. MEYER, M.D.
Springfield, Ill.

Dr. Keating's Reply

The letter from Doctor Meyer is evidence of the interest the medical profession is taking in the question of private practice versus State Medicine.

No right-thinking person believes that those who are able to pay for food, clothing or medical service should have those necessities given to them for nothing. To take away people's self respect is to do them a great injury.

Now we will consider the injury done to the doctor's fellow practitioners, who do not believe that people able to pay should receive free service or free medicine.

Doctor Meyers says, "The garage man charges you for labor and parts." Of course! But the garage man does not have the parts furnished free by the county or state government! If Doctor Meyer is called to

see a patient who is able to pay, it is his duty to have that family purchase the antitoxin needed at the neighborhood drug store, and charge the family for his services in making the diagnosis and administering the remedy. If Doctor Meyer's next call is at the home of a family which is destitute, it is his duty to administer antitoxin furnished by the State and charge nothing for his own services.

Those physicians who insist upon the well-to-do paying for the antitoxin, as well as the service rendered, cannot compete with those physicians who give free antitoxin to the well-to-do and charge only for their services.

The question arises: If it is the duty of the State to pay the manufacturer for antitoxin administered to the destitute, free of charge, is it not also the duty of the State to pay the private physician who administers the antitoxin?

EMMET KEATING, M.D.

Chicago, Ill.

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[Dr. Keating's position appears to be sound, and we should answer his closing question in the affirmative.

As a matter of fact, many towns and most cities have paid health officers, to whom destitute persons may go for the administration of serums and antitoxins, which the State provides *for the use of the poor*. To obtain these supplies free and use them upon able-to-pay patients, is to divert them from the purpose for which they are intended.—ED.]

Discovering Mental Defectives

IN ALL lines of human activity, the mentally defective person is a liability, but in the Army, especially in time of war, his failure to cope with the situation may have disastrous results.

The average physician is entirely able to detect disabling physical abnormalities, but mental or psychic defects and diseases can often be discovered only by a trained psychiatrist, of which the Army never has any superfluity.

Realizing the importance of eliminating the mental incompetents from among the drafted men, during the War, I evolved a simple procedure which worked so effectively that it seems worth passing on to others.

When a new batch of draftees arrived they were assigned to a special *reception camp*, and medical officers were placed with them, one at a time and changed every four hours, whose duties were simply to *watch* the men and make a note of the names and organizations of any whose appearance or conduct appeared unsatisfactory or suspicious.

When these men were sent to their units, after a few days, their records were accompanied by a note to the regimental surgeon, calling his attention to them. He, then, watched them carefully during their physical examination and in the performance of their duties and set aside for intensive study those who were slow and clumsy in learning the drill or who failed to adapt themselves to their new surroundings. The examination blanks were held up for a few days, in order to permit this study of the men in action. Suspicious cases were hospitalized *for record*.

The regimental surgeon then called in the company commanders and non-commissioned officers of the units to which the suspected defectives belonged and said, "If, after one week, these men do not shape up with the average, give me their names and they will be carefully studied by the psychiatrists." Line officers are glad to cooperate in this way. The company officers see the men every day, and, if the surgeon can gain their confidence, much can be learned.

In making a study like this, one must be careful not to mistake homesickness, illiteracy or a scant knowledge of English for moronism or any nervous or mental disease, such as epilepsy or dementia. Examining boards should be changed every four hours, so that they may not go stale, and no examiner should work more than eight hours a day. They need not try to make careful diagnoses during these examinations, but merely weed out the inadequates for sending back to their homes.

When the troops were ordered to the front, the regimental medical officers kept lists of all the men who were repeatedly on sick report with trivial disorders, and these men were sent to the division psychiatrist, who went over them rapidly and advised the regimental surgeons as to their disposition.

A division handled in this manner went

through severe service in the trenches, with no psychic blow-ups. The only cases of "shell-shock" were those of *physical* origin (due to compression and decompression) and recovered satisfactorily.

The scale methods of psychic standardization are timeconsuming and ineffective; but any medical officer, or even an intelligent company commander, can detect most cases of psychic inferiority by close observation and ordinary conversation.

KENT NELSON, M.D.,
Col. Med. Corps, U. S. A.
University of Minnesota.

Making Friends

ONE OF the most valuable contributions of the nursery school to the life of young childhood is the opportunity which it offers tiny children to form friendships with children of their own age, outside their immediate family.

In the past we have thought that the normal human relationships for young children were those with adults. The kindergarten age of about five years was accepted as the youngest age for an interest in other children and the forming of friendships.

Nursery school experience, however, has taught child psychologists that children of only three or four years are capable of forming friendships with each other and that the experience is, not only a joy to them, but is extremely valuable to their social adjustment and mental well-being in later years.

The value of friendship for adults, older children and adolescents is well recognized. Any well-rounded, efficient adult life derives much of its stimulation from friendships. For adults, friendships are a close second to family relationships in determining both success and happiness. Indeed, the same qualities which help to make satisfactory friendships are necessary for successful family relationships and essential to happy marriage.

But where do adults get their capacity to make friends? The ability to make friends, like the ability to live fruitfully with the family has a long history of growth and development.

It is, of course, improbable that the individual friendships formed by children of three and four years will be lasting. The moving of residences and the changes in family social contacts make three and four-year friendships usually a brief experience. What may last, however, is the understanding of what it means to have a friend, and what some of the obligations, as well as the joys, of friendship are.

I have known competent and professionally successful adults who regarded friends merely as social pleasures, like a good theatre or concert. For such a person, as soon as a friend began to be in any sense the source of obligations for effort or for financial aid, the friend was discarded. The friend then ceased to perform his recognized function.

For most of us such a standard of friendship seems socially very inferior. We should dislike to see our own children growing up with, or living by, such a concept of friendship. As in other realms, the establishment of standards and concepts of friendships begins young. A little child who finds out that the keeping and enjoying of friends involves generosity and consideration and a vital kind of social cooperation, is acquiring a basis for forming friendships which may serve him all his life.

This establishment of good standards of friendship becomes a vital factor in preparing a child as best we may for successful marriage and for the founding of a family. This always remains a central purpose of parents as long as we cling to the belief that good family life is our best social unit. From this point of view, then, laying the foundations for real friendship early in the life of the child must remain important. Since friendship-making, as young as three and four years furnishes a start in building up standards and ideals of friendship for life, let us give our three-year-olds a chance to make a few friends among their peers, instead of surrounding them entirely by an admiring circle of friends and relatives —all adults.

HELEN T. WOOLEY
Teachers College,
Columbia University,
New York.

THE LEISURE HOUR

About Writing

THIS writing business! What is there about it that so lays hold of one—this urge to write and write and write, even though one knows not what to write about, nor what to write about it?

Much the same urge, no doubt, as that which impels the loquacious person to talk and talk and talk, though his talk, too, may lack both subject and predicate and be but a mere flow of loose-strung ideas, with no great rhyme nor reason nor goal. The urge, if you will, to self-expression, whether for companionship's sake, or to sheer off *ennui*, or to stave off serious thought or to recompense for the lack of ability for that; much as one, passing the lonely graveyard in the spooky, dimly moon-lit night, whistles to bolster courage.

Yet why should one know not about what to write when earth and air and all human experience fairly teem with subjects that crowd in upon consciousness, if consciousness be only awake "Ah! There's the rub"—if consciousness be only awake! How much of apparent consciousness is really not that at all, but is a sort of wakeful unconsciousness—a peripatetic coma—in which, machine-like, we move about, seeing and hearing and doing, but in which little or nothing actually registers upon the mental retina!

"Eyes they have, and see not; ears have they, and hear not." Somewhere that is registered in good old print. It's a fine translation of the original; but it doesn't always "get over." It's less elegantly but, perhaps, more vigorously expressed by the vernacular of the man-about-town who charnel-housely describes one as "dead from the neck up." All of which the street gamin succinctly condenses into his jeering hail, "Hey, Unconscious" (which he doubtless could not spell at all). So easy is the descent from the sublime to the ridiculous!

Which, however, illustrates our point. There's an urge to write. For whatever reason you like, you go "roll your own." You start writing something—anything—to set your ideas flowing while casting about for a subject. And then, out of human experience, porpoise-like, up rolls one—this so-common quasi somnolence—with a train of associated ideas. And lo, the thing writes itself. One just yields to the urge; one does something about it! Old Man Subconscious helps lustily in the doing, if one has been feeding him well in the past.

That goes for some kinds of writing; but, naturally, not for all. For technical writing, one must know one's "technics." Articles take digging for facts and their accuracy. Stories need "laying out," as the draughtsman says, for plot and the inlay of incident and detail. All such work the other way about—subject first, then predicate.

But whatever the urge that impells one to write, *write at it*—"Get going," as they used to say back in Spanish War days. "Writing makes the 'idees' flow faster," to plagiarize the meter if not the diction of another old timer. And, in the writing, to come down to a more recent day, "Ain't we got fun."

HARLOW D. GROSE.

Joliet, Illinois.

Why the Major Didn't Suit

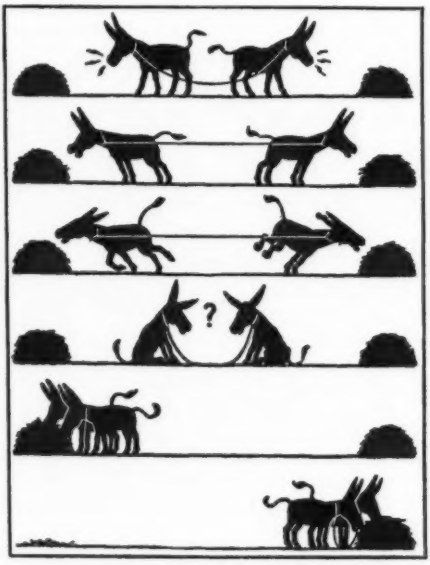
On a voyage of one of the Cunard liners from New York to Liverpool, a Maj. H. Reynolds of London was registered on the passenger list. The purser, running over the names, assigned to the same stateroom, as fellow travelers, this Major Reynolds and a husky stockman from the Panhandle of Texas.

A little later the cattleman, ignoring the purser, hunted up the skipper.

"Look here, cap," he demanded, "what kind of a joker is this here head clerk of yours? I can't travel in the same stateroom with that there Major Reynolds. I can't and I won't! So far as that goes, neither one of us likes the idea."

"What complaint have you?" asked the skipper. "Do you object to an army officer for a traveling companion?"

"Not generally," stated the Texan, "only this happens to be the Salvation Army. That there major's other name is Henrietta."—*Union Mutual Messenger.*



TEAMWORK
An Editorial Without Words.

Precautions

The Presbyterian minister had been summoned to the bedside of the Methodist woman who was very ill. As he went up the walk he met the little daughter and said to her, "I am very glad that your mother remembered me in her illness. Is your minister out of town?"

"No," answered the child. "He's at home, but we thought it might be something contagious and we didn't want to expose him to it."—*Medical Suggestions.*

No Chance Now

Gruff Father to Son: "Why don't you get out and find a job? When I was your age I was working for $3 a week in a store; and at the end of five years I owned the store."

Son: "You can't do that nowadays. They have cash registers."—*Boston Globe.*

The Surgeon

By Wilfred J. Funk

Now he begins: His fingers feel
The tiny burning bit of steel:
They move, obedient to a star
Unseen by us: his sure hands are
So swift that the swift hands of death
Are held; there is one slender breath
Between the two, so delicate
No calipers can measure it
Save those he holds—I think there is
No act so near to God as his.

—From *Bozart* (Atlanta)

The Chicago Medical Society denounces the holier-than-thou drys as racketeers of righteousness. Say what you will, the docs do work off a pretty smart wisecrack now and then.—*Line O' Type.*

A Public Service Family

Having been told that it was electricity that made his mother's hair snap when she combed it, Jonny bragged to a visitor: "We're a wonderful family; mother has electricity on her hair and grandma has gas on her stomach."

Try and Do It

Explanation by an inspired nurse in a Chicago examination

Question: On which may traction be used, when a foot presents, or a hand?

Answer: When a hand or foot presents traction should be used on uterus after inserting the hand or foot. The idea is push up the part presenting and to shove the head down into the pelvis gaining if possible a normal delivery. If this can not be done a virgin must be done.—J.A.M.A.

Thumbnail Therapeutics

Control of Barbital Anesthesia

From animal experiments and from results in one clinical case of barbital poisoning, the authors are of the opinion that the recovery time from barbital anesthesia in dogs and poisoning in man may be greatly reduced by active diuresis. In the animal experiments, the average recovery time in dogs, from a dose of 225 mg. of barbital-sodium intravenously, was reduced from 37 hours to 18 hours by the intravenous injection of one liter of 10-percent dextrose solution, one hour after the animal had received the barbital-sodium. —Drs. C. A. Johnson, A. B. Luckhardt and J. A. Lighthill, in *Proc. Instit. Med.*, Chicago, May 15, 1930.

Induced Phagocytosis and Heat in Infection

Heat, applied locally, is the agent that induces local hyperemia which, under ordinary conditions of phagocytosis, is capable of carrying into a field of infection a greater number of phagocytes relative to the increased flux of blood into the field and under conditions that are favorable to the destruction of the bacteria in the local field.—Editorial in *Phys. Therap.*, July, 1930.

Bone and Cartilage Grafts

The best place from which to obtain bone for a transplant is the crest of the ilium. It is frequently taken from the tibia or the rib, but the ilium has been found most satisfactory. It is easily accessible, it may be removed with slight danger and has a much greater spongy surface; it also has much higher generic value and may be shaped much more easily. There are cases where it would obviously not be the location of choice, but where possible it is the best place. Cartilage is taken from the costal arch, and frequently from the ear. The amount that can be obtained from the ear without danger and without scarring, is surprising.—Dr. F. B. Moorehead, Chicago, in *Bull. Chicago Med. Soc.*, Dec. 11, 1929.

Bronchiectasis

The only satisfactory treatment for bronchiectasis is by pneumothorax or thoracoplasty.—Dr. A. A. Lillien, New York City.

A Good Gargle

A good gargle is something that most doctors need to prescribe frequently. Here is a formula that works well:

℞

Metaphen (2500) .....f ℥ iv (120.0 cc.)
Glycerin .....f ℥ iss (45.0 cc.)
Distilled Water.....f ℥ iiss (75.0 cc.)
M. et Sig.: Use as a gargle every hour.

Frank B. Kirby, M.D.,
Evanston, Ill.

Viosterol in Tuberculosis

In pulmonary tuberculosis, viosterol checks the exudative process and favors scar formation; it also checks night sweats, reduces fever and causes a gain in weight. These results appear within six months if the viosterol is given in daily doses of 5 to 10 drops.—Dr. H. Menschel, in *Münch. med. Wchnschr.*, Feb. 7, 1930.

Lemon-Juice Milk

A study of a series of infants who received lemon-juice milk for periods of from 6 to 12 months, showed that they manifested a better rate of growth than those who received other milk preparations.

Lemon-juice milk is whole milk, to which approximately 28 cc. of lemon juice per liter is added. This milk is also of value as a food for children suffering from pneu-

monia and other respiratory ailments.—Dr. L. H. Barenberg and associates, of Brooklyn, in *Am. J. Dis. Child.*, May, 1930.

Dextrose Intravenously in Diabetes

The intravenous administration of 250 cc. of a 10-percent solution of glucose (dextrose), to which from 20 to 50 units of insulin has been added (the amount of insulin depending upon the severity of the diabetes), resulted advantageously for diabetic patients on whom an operation had been performed and in cases of diabetic coma.—Dr. H. J. John, Cleveland, in *Surg. Gynec. & Obstet.*, April, 1930.

Catheterization

In catheterization of males, an anesthetic is sometimes necessary. A good local anesthetizing solution is as follows:

Cocaine hydrochloride .....½ percent
Sodium bicarbonate.....½ percent
Chloretone water.....¼ percent

About 1 dram (4 cc.) is injected into the anterior urethra and a clamp put on. Then, to allow for leakage, this is added to from time to time until about half an ounce (16 cc.) of the solution has been used. Experience of thousands of cases shows that this is the best solution to use.—Dr. H. L. Attwater, in *Practitioner*, Lond., May, 1930.

Phenobarbital in Migraine

In certain cases of migraine, relief is obtained from ½-grain (32 mgm.) doses of phenobarbital, night and morning. If improvement occurs, the morning dose should be omitted.—Dr. W. R. Brain, in *Lancet*, Oct. 26, 1929.

Sulphur in the Fever Treatment of Paresis

Intramuscular injections of a 1-percent suspension of sulphur in olive oil, to induce fever, gave excellent results in the great majority of 14 experimental clinical cases of paresis. The injection is best made in the abductor muscles of the thigh. Ten (10) cc., but better 8, is the maximum amount to be injected. The first dose varies from 1 to 2 cc., according to the patient's weight, and subsequent amounts are based upon the febrile reactions. Fever begins to develop 10 to 12 hours after injection and rises to its greatest height (103° to 105.5°F.) within the next 4 hours. A local reaction at the site of injection may persist for a day or two.—Dr. Chas. F. Reed, of Elgin, Ill., in *Illinois M. J.*, Jan., 1931.

Diphtheria Antitoxin in Boils

To incise a boil at any stage of its career is to lengthen its existence. A boil should not be poulticed; nor should a boil ever be squeezed.

Local treatment of a boil is only very rarely demanded. The most efficacious treatment is by a vaccine—autogenous or stock.

Diphtheria antitoxin is a specific enemy both of staphylococci and streptococci and, when administered promptly and in sufficient doses, it may be trusted implicitly to abort a boil or a carbuncle.—Dr. L. Williams, in *Practitioner*, Lond., March, 1930.

Insulin as a Tonic

The use of hypodermic injections of insulin as a tonic, in certain cases of malnutrition, was undertaken as an empiric medication. Investigation showed that insulin favored the flow of gastric and pancreatic secretions and bile. The appropriate dosage is 3 to 5 units for children and 15 to 20 units for adults. The results accord with the findings of other investigators.—Dr. C. F. Davidson, Seattle, in *Northwest Med.*, Dec., 1929.

Collapse Therapy in Tuberculosis

If a tuberculous patient shows no improvement after three or four weeks in bed, collapse therapy should be used *at once*, so as to prevent the spread of disease process.—Dr. E. S. Mariette, Glen Lake Sanatorium, Minn.

Scientific Removal of Teeth

The forceps, in many cases, as the initial instrument for tooth removal, is as unsatisfactory and unscientific as was the grab-and-tear method of the former tonsillectomy. In the early days, when tooth extracting was performed by barbers, blacksmiths and untrained male nurses, the operation was not much different from that which

is generally in vogue today. The forceps should be used only to remove the loosened tooth from the mouth, after its attachments have been severed by surgical methods.—J. D. FRANKEL, D.D.S., in *Chicago Dent. Soc. Bull.*, Aug. 15, 1930.

Anesthesin in Throat Surgery

Anesthesin should be employed preliminary to all throat operations, one tablet being dissolved in the mouth thirty, twenty and ten minutes before operation.—DR. R. E. FARR, of Minneapolis, in *Am. J. Surg.*, Feb., 1930.

Acute Edema of the Lungs

Acute edema of the lungs is a manifestation of a grave derangement of the pulmonary circulation and death frequently occurs during the attack. The hypodermic injection of morphine, ¼ grain (16 mgm.), with atropin sulphate, 1/100 grain (0.6 mgm.), may cut short the train of symptoms and prevent a fatal termination. If there has been delay and the patient is seen at the height of the attack, venesection, with the withdrawal of 15 to 20 ounces, is the only treatment likely to benefit or perhaps save the patient.—DR. T. F. COTTON, in *Practitioner*, Lond., March, 1930.

Hypotension and Lactic Acid

Present-day foods (pasteurized milk, for example) do not supply beneficial lactic acid, but spore-forming organisms that can resist pasteurization are being supplied disproportionally. There is a possible relationship between one of these—the gas bacillus—and hypotension.

The extraordinary activity of the gas bacillus in the presence of carbohydrates and its production of histamine-like substance seem to be responsible for hypotension.

The remedy is dietary revision, whereby lactic acid-bearing foods, such as buttermilk, are supplied. The lactic acid inhibits the growth of the gas bacillus.—DR. A. I. KENDALL, in *Illinois M. J.*, Dec., 1929.

Wet and Dry Dressings

In selecting a wet or dry dressing for any lesion, one must decide just what is to be accomplished, whether it is protection from more infection, dehydration, removal of bacteria present, a "poultice" action or simply support of the body resistance by the use of heat. For the most part, if dressings are to be dry, they should be kept very dry; if wet, they should be very wet and kept wet. Open wounds should generally be treated with uncovered dry dressings. When the skin is unbroken and in low grade infections, hot, wet dressings are best. In suppurative processes, with the skin unbroken, a hot, wet, covered dressing, acting as a "poultice," is most suitable. However, "poultice" dressings should not make an incubator out of an infected wound by sealing the dressing.—DR. C. L. HOAG, San Francisco, in *Am. J. Surg.*, Feb., 1930.

Conduction Anesthesia

The physician or surgeon who, in this day and age, is not prepared to give certain patients conduction anesthesia is inefficient to the extent of denying his patients something to which they are justly entitled; namely, the safest anesthetic.

The advantages of conduction analgesia are many and those of the profession who are familiar with its use look upon it as the safest form of anesthesia we possess (with the possible exception of local) for all major or minor surgical procedures.—DR. G. P. PITKIN, Bergenfield, N. J., in *Am. J. Surg.*, Feb., 1930.

Amenorrhea and Acidosis

The conditions causative of amenorrhea, apart from gross pelvic lesions, are almost all associated with some degree of acidosis, the plasma bicarbonate being definitely decreased during menstruation. Several cases have been successfully treated by alkali administration, in increasing doses up to several hundred grains per day.—DRS. A. A. OSMAN and H. G. CLOSE, in *Practitioner*, Lon., April, 1930.

Current Medical Literature

Allergy and the Acid-Base Balance

In J.A.M.A., Nov. 22, 1930, Dr. H. Beckman, of Milwaukee, suggests that enthusiasm for the exclusive study of sensitization and desensitization, in connection with allergic diseases, should be abated at least to the extent of admitting that there are several other factors, perhaps of equal importance, contributing toward the make-up of the allergic state.

Chief among the other factors Dr. Beckman considers **alkalosis.** The tendency of the allergic individual is toward alkalosis, and the more acidotic he becomes the less he is disposed to allergy. A number of conditions having an acidotic tendency (diabetes mellitus, starvation, pregnancy, etc.), which inhibit allergy, are asserted to do so by reason of their tendency to acidosis. Similarly with drugs, such as calcium, whiskey and acetylsalicylic acid, which cause relative acidosis.

Dr. Beckman has for several years advocated the use of the following formula in the treatment of hay-fever:

℞

Nitrohydrochloric acid (*not* the dilute) 18 Gm.
Water.....to make 120 Gm.

Label: One teaspoonful in 2/3 glass of water, followed by another glass of water, after meals and again on retiring, as near midnight as possible.

This remedy has been used by 34 physicians in 237 cases, with these results: 67 percent completely or very markedly relieved; 33 percent not relieved. This compares with 70 percent complete or marked relief obtained by densensitization, under the best circumstances.

Dr. Beckman suggests an extensive and intensive study of the acid-base conditions in allergic diseases.

Barbituric Acid Hypnotics in Surgery

In *Am. J. Surg.*, July, 1930, R. H. Fitch and Drs. R. M. Waters and A. L. Tatum, of Madison, Wis., report experimental and clinical investigations with intravenous injections of barbiturates in the production of surgical anesthesia. They have found that attempts to use these drugs as a sole anesthetic agent, even for minor surgical operations, proved unsatisfactory. It was necessary in almost all cases to supplement the barbiturate with a volatile anesthetic.

A recognition of the foregoing fact indicates that they should never be used otherwise than as an adjunct to other forms of anesthesia.

Postoperative excitation and delirium were occasionally observed with all three barbiturates tested [Amytal, Pernocton and ethyl-methyl-butyl barbiturate (Nembutal)]. The duration of this period was, however, comparatively short with Nembutal and Pernocton, as compared with Amytal.

The authors' belief, based on their experience, is that the barbituric acid derivates, administered intravenously, promise to offer a worthwhile addition to the armamentarium of the physician, more than to that of the surgeon. A nervous type of patient can be taken to the operating room asleep.

Malnutrition in Children

Malnutrition in children presents a complex problem and therapeutic procedures often fail in private practice. The common practice of giving tonics and appetizers is perhaps greatly overdone and should form a very minor part in treatment.

The giving of an adequate diet alone will fail in treating malnourished children, unless we also establish proper health habits. It is for this reason that so many undernourished children, who are free from organic defects, do so remarkably well in a convalescent home under a simple regime: (1) adequate diet; (2) proper rest, with perhaps extra rest periods during the day; (3) attention to the hygiene of the intestinal tract; (4) moderate amount of outdoor play; and (5) systematic physical examination. In other words, the home environment of these children plays a major role. Under a regime their nervous systems are improved, their functional capacity increased and ultimately their weight curve is increased.—Dr. H. C. Metzger, of Detroit, in *J. Michigan S. M. S.*, Dec., 1930.

Sudden Blindness

In *New York St. J. Med.*, Dec. 15, 1930, Dr. G. Frey, of New York, discusses various causes of sudden temporary or permanent blindness.

A partially subluxated lens seldom causes extensive reduction in vision, but when the dislocation is such that no more than the periphery of the lens appears in the pupil, the eye is virtually aphakic.

Injuries to the cornea resulting in mechanical or caustic abrasions in the pupillary area cause immediate reduction in vision, but the prognosis is on the whole favorable. There may be dense and extensive corneal scars without industrial blindness.

A hemorrhage into the anterior chamber or into the vitreous may cause extensive reduction in vision and great concern to the patient. If it is the sole lesion it may be absorbed very quickly.

If detachment of the retina results from hemorrhage, there is some prospect of reattachment with absorption of the blood, but the prognosis in general is very bad.

Closure of the central retinal artery by em-

bolism strikes the individual totally blind, instantly and permanently. If a case be seen very early, the exhibition of amyl nitrite and paracentesis of the anterior chamber are indicated, in the hope that the ensuing reduction in intraocular tension and capillary vaso-dilatation may cause the embolus to be dislodged.

Blindness due to drug and other poisons may be permanent, but there is more usually recovery of all or a great part of the vision.

Sudden blindness occurring in acute glaucoma generally affords a favorable immediate prognosis.

In sudden blindness due to retrobulbar neuritis, the prognosis is favorable, if the underlying condition can be diagnosed early and relieved.

In all eye affections other than traumatic, it must be remembered that the eye condition is usually related to disease elsewhere, which should be attended to.

Contraception and Public Health

In *Am. Med.*, Nov., 1930, Dr. Ira S. Wile, of New York City, remarks that no more important problem faces those who are seeking to lower infant mortality than to attack the problem growing out of deaths during early life.

A health commissioner, in considering the problems of reducing infant mortality should take note of the possible effect of diminished child-bearing upon the public health. Contraception is opposed to abortion, and a knowledge of contraceptive methods will lessen occasions for and deaths from abortion.

A diminished birth rate carries with it a lower mortality rate and a lower infant mortality rate. To this extent the limitations of offspring constitutes an important factor in reducing the deaths of a community. Phrased more properly, a diminished birth rate enhances the life values of a population and raises the level of health of the community. For this reason public health officers should be concerned in present-day discussions of the limitation of offspring by contraception, irrespective of such added interest as may arise from an appreciation of the problems of economics, education, public welfare and public advancement that are bound up in a lowered birth rate. Health officers should be leaders in interpreting vital facts and their interest should give them convictions and courage to express their ideas upon the relation of contraception to public health.

Diagnosis of Contracted Pelvis by Impression Method

According to Dr. D. S. Hillis, of Chicago, in *Surg. Gynec. & Obstet.*, Dec., 1930, the relation between the biparietal diameter of the fetal head and the true pelvic conjugate of the mother can be determined by the impression method.

With the patient in the lithotomy position, the examining finger in the rectum locates the tips if the ischial spines and notes the relation of the lowest part of the baby's skull to a line drawn between them. The hand on the outside is placed above the breech of the baby and is sunk as deeply as possible toward the mother's spine, *the forearm parallel to the long axis of the mother.* Pressure is then made on the breech toward the pelvic inlet and the descent of the head noted with reference to the interspinous line, allowance being made for the thickness of the lower uterine segment and the cervix or caput succedaneum, if present. To avoid traumatism and pain, the pressure is begun gradually and, after the maximum is reached, is slowly reduced.

If the head cannot be impressed to the spines, an assistant places the palm of one hand flatly over the middle of the baby's back to prevent flexion and the fingers of the other hand, placed palmar surface downward above the head over the symphysis, presses the head downward and backward in the axis of the inlet, while the examiner makes pressure on the breech and notes descent with the internal finger.

With the use of this method, in several thousand cases, there never has been observed bad effects of any kind to mother or babe.

The examination is made when the patient enters into labor.

Local Anesthesia in Mastoidectomy

General anesthesia may at times be contraindicated for either a simple or a radical mastoidectomy.

In *Laryngoscope*, Dec., 1930, Dr. L. M. Hubby, of New York, states that mastoidectomy under local anesthesia is an exceedingly disagreeable operation, but that fortunately the perception of pain may be dulled with morphine and the cerebral centers dulled with scopolamine.

One hour before the operation, morphine, grains 1/10 to ⅛ (6.4 to 8.0 mgm.) and scopolamine, 1/300 to 1/200 grains (0.21 to 0.32 mgm.), are given to an adult and repeated half an hour later, if there is no slowing effect on the respiration or other untoward symptom.

Infants may be given 1/100 grain of morphine before the operation, omitting the scopolamine.

Combination Anesthesia with Sodium Amytal

On the basis of 200 surgical cases in the Santa Barbara College Hospital, Calif., in which combination anesthesia with sodium isoamyl-ethyl barbiturate (sodium amytal) was employed as the basal agent, Dr. F. L. Grandstaff, of Santa Barbara, reports, in *Am. J. Surg.*, Nov., 1930, that this barbiturate did not produce anesthesia but produced hypnosis.

The administration of sodium amytal produced a lowering of blood pressure in all cases and the decrease was more marked in cases of hypertension and arteriosclerosis. Such patients were given smaller doses than others and at a slower rate.

Diabetic patients were considered satisfactory anesthetic risks when their diabetes mellitus was under control and the CO_2 combining power of the blood readily obtainable. Decreased liver function was assumed to delay the elimination of sodium amytal; however, this was not proved and it could not justly be termed a contraindication. The only idiosyncrasy noted appeared as a bright red rash in 1 percent of the cases.

The general dosage was computed at 1 grain (0.065 Gm.) of sodium amytal per 10 pounds of body weight. It was administered in the form of a 10-percent solution, intravenously, not more rapidly than 1.0 cc. per minute, reduced to 0.5 cc. per minute as soon as the patient became unconscious.

The production of hypnosis in patients in their rooms, without excitement and untoward sensations, decreased psychic trauma to a minimum.

Postoperative complaints of nausea and vomiting were, absent in 95 percent of the cases. Paresis of the intestinal tract and gas pains were less than usual.

The quantity of inhalation anesthetic was reduced.

Use of sodium amytal as the basal agent, in combination with inhalations of N_2O gas and oxygen, with or without a pre-operative dose of morphine, produced satisfactory obtundation for all major surgical operations and was considered to have many advantages not obtainable from other anesthetic drugs.

Lesions of the Male Breast

In *Illinois M. J.*, Dec., 1930, Drs. M. P. Neal and B. T. Simpson, of Buffalo, report that, in 54,430 pathologic specimens examined since 1900, 5,314 were of the breast and, of these, 512 were of the male breast.

The diseases found in this group of 512 male breasts were:

1.—Fifty-one, or 33.55 percent, were cases of mastitis. (Acute mastitis four cases, or 2.63 percent; chronic mastitis forty-seven cases, or 30.92 percent.)

2.—Three, or 1.97 percent, were cysts. Of these only one, or 0.65 percent, arose in the breast proper.

3.—Fifty-four, or 35.52 percent, were non-neoplastic diseases.

4.—Sixty, or 39.47 percent, were benign tumors (or 65.15 percent of all tumors).

5.—Thirty-five, or 23.02 percent, were malignant tumors (or 36.84 percent of the neoplasms) divided as follows: (a) Sarcoma seven cases, or 4.6 percent (or 20 percent of the malignant tumors); (b) carcinoma of skin origin, three cases, or 1.97 percent; (c) carcinoma of duct or acinus origin, twenty-five, or 16.44 percent. The twenty-eight cases of carcinoma represent 80 percent of the malignant conditions.

6.—Ninety-five, or 62.5 percent, were true neoplasms.

7.—Three, or 1.97 percent, were ungrouped cases.

Insulin and Heart Disease

That insulin medication is not without its hazards, in patients with a previous cardiac history, is illustrated by a case history reported by Dr. F. S. Modern, of Arrowhead Springs, Calif., in *J.A.M.A.*, Jan. 31, 1931, in which heart pain of three years duration was precipitated in a patient, aged 61 years, by prolonged overdosage of insulin. Since 1924 this patient had been using from 28 to 35 units of insulin once daily and was on a slightly restricted, unweighed diet, on which her existing glycosuria was not controlled. Recently, by mistake, she had been taking 72 units of insulin instead of 36 for a few days.

Breast-Fed and Bottle-Fed Babies

Based on the clinically observed statistical data, obtained in groups of babies, in which all other factors except the mode of feeding—breast feeding and bottle-feeding—were as far as possible the same, Drs. H. K. Faber and T. L. Sutton, of San Francisco, report in *Am. J. Dis. Child.*, Dec., 1930, that during the first quarter of the first year of life, breast-fed infants show a significantly better mean rate of gain than properly bottle-fed infants.

After the first quarter of the first year, artificially-fed infants show a significantly greater mean rate of gain, and this superiority becomes progressively greater up to the time of weaning.

In the material studied, the number of infections per baby and proportion of babies having infection were greater in the breast-fed group in the first, third and fourth quarters and greater in the bottle-fed in the second quarter. The number of infections in the breast-fed after weaning (fourth quarter) was greatly in excess of that in the bottle-fed. There is no evidence in this series of cases of increased resistance to infection from breast-feeding, but rather evidence of either increased susceptibility of greater exposure or of both.

Weaning after the third month is not *per se* to be feared, provided artificial feeding under good conditions is available.

Diagnosis of Undulant (Malta) Fever

The close relationship, if not identity, of the organisms causative of Malta fever and contagious abortion in cattle and other animals has been fairly well established.

In *Ohio St. M. J.*, Dec., 1930, Dr. P. F. Orr, of Perrysburg, O., states that the intermittent or undulating type is the typical socalled Malta fever. The only difference between this and the non-undulating type is that the patient has a series of attacks and remissions, whereas in the non-undulating or continuous type there is only one attack, which lasts as a rule for a period of from 6 to 8 weeks, followed by general recovery.

In making a clinical diagnosis, very little assistance can be obtained from physical examination. However the symptomatology, if carefully obtained, enables one to make a fairly definite diagnosis in a large percentage of cases. The most outstanding symptoms are the type of fever, the occurrence of sweats, the marked nervousness of the individuals; an important diagnostic feature also is the general well appearance and wellbeing of the individual, considering the relatively high fever and the long duration of the illness. The patient may run a temperature of 103°F. for several weeks, and yet the face shows little change; the tongue may not be furred, the breath foul nor are there any signs of a marked toxemia.

Cases show a rather characteristic diurnal

temperature variation (99° to 103°F.). During the afternoon headache may appear or become severe; profuse sweating is frequent; chills and rigor occur during the afternoon; the patients usually complain of insomnia and are nervous; progressive loss of weight, amounting to 20 or 30 pounds in the course of several weeks, is noted; constipation is the rule and there may be other symptoms, varying with the patient.

Usually a positive agglutination test is obtained after the first week; then gradually increases and may reach even 1:20,000; but a titer of 1:320 is diagnostic of the disease. There is usually a leukopenia and a relative lymphocytosis. Positive blood cultures are difficult to obtain and negative cultures should not be considered of importance. The organisms isolated are usually of the bovine type.

The control of this disease depends largely upon the pasteurization of milk for human consumption.

Vasoligation in Cases of Prostatic Obstruction

The incidence of epididymitis following prostate operations varies between 20 and 40 percent, according to the literature.

In *New York St. J. Med.*, Nov. 15, 1930, Dr. G. A. Cashman, of the urologic service, Bellevue Hospital, New York, states that, since June, 1924, practically every patient with probable prostatic obstruction is taken to the operating room before repeated catheterization, the vas is drawn through a small skin incision over it, ligated and about 1 cm. of it and its sheath removed. Following closure of the wound, an indwelling catheter is placed.

From 1924 to 1929 the incidence of epididymitis in 327 prostatic patients subjected to some form of operative relief was 18.5 percent; of these 119 had some form of vasectomy. Of those not having vasectomy, 52 (25 percent) developed epididymitis.

A Practical Renal Function Test

In *Urol. & Cut. Rev.*, Dec., 1930, Dr. I. U. Reaves, of Mobile, gives the following practical test of kidney function (a modification of a test used by Dr. R. Schwarz, of Vienna), which any general practitioner may employ.

Have the patient drink 1,500 cc. of water or a bland fluid between 7:30 and 8:00 o'clock in the morning. Empty the bladder at eight o'clock voluntarily, or by catheter if necessary. Leave the catheter within the urethra and fasten it as a retention catheter, if residual urine is present. Control the urine every half-hour until ten o'clock, by measuring the amount excreted and the specific gravity of each amount. Collect urine again at eleven o'clock and at twelve o'clock, measuring each amount, as before, for quantity and specific gravity. Now collect the urine again at two, four, six, and eight o'clock, measuring both quantity and specific gravity each time the urine is collected.

The total urine excreted during the morning, or from eight o'clock through twelve o'clock, should be between 60 percent and 100 percent of the 1,500 cc. of water or other fluid consumed between 7:30 and 8:00 o'clock. An output during this period should be 900 cc. at least, the largest part of which should be either the second or third portion collected, but may be a later portion. A low specific gravity of the morning urine evidences a normal diluting power of the kidneys.

As no fluid of any kind is taken after the 1,500 cc. of fluid between 7:30 and 8:00 o'clock in the morning, and the meals are without soups, liquids or semi-solid articles, the afternoon output of urine should be small in amount but of high specific gravity, showing the kidneys to be capable of excreting with very little fluid a high percentage of solids. If at either six or eight o'clock in the evening the urine is of 1.015 specific gravity or over, there is no danger of uremia following any surgical procedure. In other words, a one-step prostatectomy may be advised. Should the maximum concentration be lower than 1.015, uremia may develop if any surgery is undertaken. Fluctuations above this low point are of no importance.

In cases where the blood-nitrogen begins to rise, it will be found that the afternoon concentration is below 1.015.

The dilution and concentration tests of kidney function give earlier information in reference to the functional capacity of the kidneys than any other functional renal test.

A New Rapid Method for Tissue Diagnosis

A new staining procedure, applicable to both fresh and formalin-fixed frozen sections, is described by Charles F. Geschickter, Edward P. Walker, A. M. Hjort, and Carl H. Moulton in *Stain Technology* for Jan., 1931. The essential features are as follows:

1.—A buffer solution or prestaining bath, of the following composition, is used to collect the sections as they come from the microtome:

Potassium acid phosphate	6.75 grams
Normal sodium hydroxide	30.00 cc.
Distilled water	570.00 cc.
Glycerin	200.00 cc.
95% alcohol	200.00 cc.

The ingredients should be mixed in the order given.

2.—The sections are then passed into the following staining solution for 20 to 30 seconds: thionin eosinate 0.75 Gm., barium eosinate 0.25 Gm., azure A 0.25 Gm., dissolved in 100 cc. of a mixture of 4 parts ethylene glycol and 1 part ethyl alcohol (95%), plus 0.2% glacial acetic acid. Other stain combinations, using the same solvents, are under investigation.

3.—The excess of stain is then washed off in two successive changes of 95% alcohol containing 20 cc. of glycerin to each 80 cc. of alcohol. The tissue is left in the first bath about 10 seconds and washed back and forth, and is then transferred to the second bath for about 3 seconds. If the sections are too blue, wash longer in the second bath or add two or three drops of 5% glacial acetic acid to the first bath.

4.—The section is next dehydrated by floating for 10 or 15 seconds in a solution of diethylene glycol monobutyl ether.

5.—The section is now cleared in n-butyl

phthalate by floating in this solution 20 seconds.

6.—The section is now floated on a glass slide, blotted dry by means of photographic lintless blotting paper, and a cover slip upon which a drop or two of gum damar has been placed is mounted over it.

Reducing Fractures Under Local Anesthesia

The site of maximum tenderness on the surface of the limb, which, as is well known, corresponds with the site of the fracture of the bone, should be noted, and the skin painted with iodine. A hollow needle should then be grasped with a sterile tissue forceps, and inserted over the tender spot. It should then be pushed in until the point of the needle touches the bone. A sterile, 10-cc. syringe, which has previously been filled with 2-percent procaine, is attached to the end of the needle protruding from the limb. Five (5) cc. of the procaine solution should be injected and the syringe detached. The escape of blood-stained fluid from the needle signifies that its point is in the hematoma, and 20 cc. of anesthetic should be injected immediately through the needle, which has remained in situ. If blood-stained fluid does not appear, then the needle should be withdrawn and re-inserted. The amount of solution to be injected depends on the size of the bones fractured, 20 cc. being the average amount required.

Under this simple local anesthesia, most simple fractures can be reduced easily.—Dr. D. Levi, in *Practitioner*, Lond., Dec., 1930.

Heredity of Cancer

From heredity studies made in the University Hospital, Ann Arbor, Mich., as given by Dr. A. Scott Warthin, in *Ann. Intern. Med.*, Jan., 1931, he finds that in man there is both a constitutional and an organ or tissue susceptibility to cancer inheritance. Several family histories are given in support of this view. In one family there were 28 cases of cancer in 146 individuals, comprising three generations.

Practically, for eugenic purposes, the individual who has a family history of the multiple incidence of cancer in several generations should take heed. He should not marry a woman who has the same kind of family history, but one who has no history of cancer in her family.

It is but rational and logical to apply preventive measures of eugenics to this problem and, till such measures are considered as practical, there can be no great hope for any speedy conquest of this great plague.

Hemorrhoids in Pregnancy

Hemorrhoids are a very common complication of pregnancy. It is the opinion of Dr. J. F. Montague, of New York, as given in *M. J. & Record*, Oct. 15, 1930, that even when the conditions prevailing during pregnancy induce compression of the hemorrhoidal veins or any portion of the portal system, hemorrhoids will not be induced except in women otherwise predisposed to their formation.

The treatment of hemorrhoids during pregnancy will naturally have to be as conservative as possible, although in severe cases it is undoubtedly better to operate than to run the risks of hemorrhage, fistula formation, etc.

The precautions especially to be recommended to pregnant women before the condition has a chance to arise are: (1) Heed nature's call to evacuate the bowels; (2) do not hurry or force defecation; (3) keep the bowels regular by diet, exercise and periodic defecation; (4) avoid such articles of diet as irritate the anal canal; (5) do not use suppositories or similar objects which are hard or rough for evacuating the bowels; (6) never lose sight of the necessity for strict personal hygiene.

If hemorrhoids occur in spite of precautions, it is wise to employ palliative measures until after the gestation period is concluded. Surgical removal under local anesthesia may be necessary, but should be avoided, if possible.

Correction of Retro-Displacement of the Uterus

In *Canad. M.A.J.*, Dec., 1930, Dr. W. F. Abbott, of Winnipeg, analyzes 100 cases of retro-displacement of the uterus.

The author used the following technic in 87 of the cases analyzed and believes it meets the requirements better than any other method employed:

The abdomen is opened through a transverse lower abdominal incision, just above the pubic hair line. The transverse incision extends down through the anterior sheath of the rectus muscle, which is dissected free from the anterior surface of the muscles. Access to the peritoneal cavity is gained by separating the recti muscles and incising the peritoneum vertically. All additional surgical procedures are carried out or determined upon.

The round ligament is picked up by a suture, about 1½ inches from the uterine cornu, and an Ellis forceps placed 1 inch lateral to this point. Under tension, the intervening ligament is split longitudinally with a scalpel, and a curved, flat bladder forceps passed through the opening. The two leaves of the broad ligament are now separated, first down along the uterus to the base of the broad ligament, and then laterally out to the pelvic wall and to the internal inguinal ring. This separation must be complete, especially along the lateral border of the broad ligament. The vessels are always found on the posterior leaf of the ligament and, with ordinary care, hemorrhage never occurs.

A curved forceps is now passed through the lateral angle of the rectus sheath toward the internal ring, then forced subperitoneally into the space between the separated broad ligament leaves and out of the opening in the round ligament, to pick up the original suture. On withdrawing the forceps the suture will be seen to invaginate the medial into the lateral portion of the broad ligament. As tension is applied it is realized that the broad ligament is being used as the support and not alone the delicate round ligament. The pull is directed toward the cervix, which must move backward, and the tension is nearly all in the base of the broad

ligament, extending from the internal ring toward the cervix and lateral uterine wall, with a relatively loose upper border or round ligament. The ovary is nearly always found well up on the lateral pelvic wall.

The suture pulls the excess ligament through the deeper abdominal wall layers into the lateral angle of the rectus sheath. Here it is sutured with chromic gut to the under surface of the rectus sheath. The opposite side is treated in a similar manner. In many cases the invaginated anterior leaf of the broad ligament may be secured by one or more sutures. The utero-sacral ligaments are plicated, if abnormally lax, and the abdominal incision is closed in any approved manner.

The Allergic Child

From his experience of a large number of cases, Dr. Bret Ratner, in J.A.M.A., Feb. 21, 1931, states that a child suffering from the so-called allergic syndromes of asthma, eczema, urticaria and hay-fever must be viewed from the standpoint of protein hypersensitiveness.

A carefully taken and thoroughly analyzed history is essential. This should include, not only the history of a typical attack, in its relation to foods, contact with animals, season of the year, time of occurrence and locality, but also a broad and general history of the case as a whole.

In addition to the history, a complete physical examination and laboratory tests, such as chemical examination of the blood, cytologic studies and roentgenograms, should be made and from 300 to 400 protein skin tests performed on each child, by the scratch method.

The author believes that etiologic factors such as sensitization in utero, sensitization by passage of antigen through the intestinal tract, and sensitization through inhalation of antigenic dusts are of paramount importance.

The management of the allergic child, under a careful regimen, presents evidence that specific protein hypersensitiveness is as basically important to allergy as the tubercle bacillus is to tuberculosis.

One hesitates to extol the virtues of so complex and still immature a subject as allergy, but an analysis of cases studied over a period of years, I believe, sanctions this presentation as a sound therapeutic procedure.

The Choice of an Anesthetic

In *Ohio St. M. J.*, Dec., 1930, Drs. H. Cabot, of Rochester, Minn., and H. Lamb, of Ann Arbor, discussing methods of anesthesia and the qualities of various anesthetics, find that each of the principal methods now in use has a field of usefulness.

Inhalation anesthesia has the outstanding advantage of protecting the patient both against pain and fear, and is, therefore, generally to be preferred. The case for ether anesthesia is not good. It should no longer be regarded as a safe anesthetic. Its entirely satisfactory administration is not simple; it must always be followed by the skillful administration of carbon dioxide and even at that will show a higher incidence of postoperative pulmonary complications than other anesthetics. Ether will lose ground as the anesthetic of choice.

For the gases, a better case can be made than for ether, and of them I believe that ethylene is the best. They should be used, as a rule, unless contraindicated and, in the present state of our knowledge, their field of usefulness has been importantly improved by the introduction of amytal. The chief contraindication to their use is the presence of pulmonary and some types of cardiovascular lesions. There will also be a certain number of patients in whom the fear of losing consciousness is greater than the fear of the operation, and their wishes in this regard should be respected.

Local anesthesia, in its rather narrow field, has an unchallenged position.

The field for regional anesthesia is somewhat circumscribed, since it is not entirely certain to produce the desired result and inevitably subjects the patient to emotional insult. Spinal anesthesia is more certain than regional. It has no advantages over regional in protecting the patient, though as an assistant to the surgeon it is unequalled. Both of these methods have a considerable field in the presence of absolute or relative contraindications to the general anesthetics. They are methods which should be available at the hands of any surgeon who desires to do full justice to his patient.

Bacterial Hypersensitivity of the Intestinal Tract

From certain experimental work by Drs. S. E. Dorst and R. S. Morris, of Cincinnati, as described in *Am. J. Med. Sc.*, Nov., 1930, they believe that conditions, variously described as autointoxication, spastic or irritable colon, mucous colitis, etc., are expressions of the hypersensitivity of the enteric tract to certain bacteria.

The experimental clinical work was carried out with autogenous vaccines from 30 selected patients. Densensitization of these patients was attempted by small daily doses of the bacterial strains to which they showed themselves sensitive by skin tests.

The socalled "normal" flora is frequently found playing an abnormal role.

The authors found also that sodium ricinoleate, administered orally, detoxifies many organisms in the enteric flora *in vitro*, as demonstrated by the disappearance of skin reactions upon the injection of strains which, before detoxification, had given marked reactions. Much evidence was deduced that the oral administration of sodium ricinoleate exerted a detoxifying action on the enteric flora *in vivo*.

Bacillary Dysentery Treated with Specific Serum

In *Am. J. Med. Sc.*, Nov., 1930, Dr. P. T Lantin, of Manila, P. I., states that, of 2,259 patients treated for bacillary dysentery in the Philippine General Hospital, from 1910 to 1927, 885 received intramuscular injections of serum and 33 patients were given serum by the rectum

The serum used was a stock preparation obtained following inoculation of horses with cultures of the Shiga and Flexner type organisms

The best results seem to have been obtained from the administration of between 51 and 130 cc. of antiserum. This was given in 20 cc. doses, three times daily for two or three days The same doses were given to adults and children.

The fatality among the cases without serum was 36.3 percent, as compared to 19.7 percent among cases treated with serum. This latter method of treatment of bacillary dysentery may, therefore, be considered, in general, as effective

The Care of the Dentist's Gas Apparatus

Punctilious care should be given to the machine, tanks and inhalers for gas anesthesia and care must be given to the room where the anesthetics are administered. Safety demands that the following precautions should be observed:

1.—Test each tank of gas for leaks, etc.

2.—Test every valve in the machine.

3.—Change washers frequently.

4.—Change the water or sponges (for moistening the gas) frequently.

5.—Wash and powder the tubing, bags and inhalers.

6.—Inspect the machine frequently for leaks and defects.

7.—Maintain at least 54 percent of humidity in the operating room.

8.—Maintain at least 72 degrees of warmth in the operating room.

9.—Maintain proper ventilation.

10.—Do not use a flame nor an electric cautery nor an electric switch in the room where any inflammable anesthetics, such as ethylene, ether, or ethyl chloride, are being used.

11.—Shut off all the cylinder valves when they are not in use.

12.—Do not permit smoking or the lighting of matches in the operating room.—R. FRIEDMAN, D.D.S., in *Dental Outlook*, Feb., 1931.

Physical Diagnosis

The real anchor of a diagnosis, according to Dr. L. Clendening, of Lawrence, Kansas, in *Illinois* M. J., Dec., 1930, is the combination of history and physical examination.

The five most frequent causes of errors in physical diagnosis in the author's experience are:

1.—To find signs that are not present.

2.—To let someone else report an important sign to you, instead of investigating it yourself.

3.—To depend on unreliable methods.

4.—To make a local instead of an inclusive examination.

5.—To insist on making a diagnosis on a single examination.

Dr. Clendening thinks that much can be learned from diagnostic machines; but the important thing is to teach the eyes and ears and hands to do what the machine does. A machine can tell us nothing that we cannot find out much better by using our own wits.

Most mistakes that are made in diagnosis are made, not because some laboratory examination has been neglected or has been made incorrectly, but because enough time was not spent upon the history and the physical examination of the patient.

The Arneth Blood Count

A modification of the Arneth blood count, introduced by Cooke and Ponder in England, consists of classifying 100 (or 200 if special accuracy is desired) polymorphs, according to the number of lobes in the nuclei which, in the human subject, usually gives five classes.

The use of the count is to give an index of the rate of production of polymorphonuclear leukocytes and their entry into the blood stream. The significance of the Arneth or polynuclear count depends on the fact that the figures are remarkably constant in health and when the individual has not been subjected to any considerable change in environment. If, however, any infection is present, this constitutes a stimulus to the marrow and a left-hand deviation is produced. The deviation is still further determined by the fact that there is an increase in the numbers of cells leaving the circulation before, as it were, their normal time.

Clinically, the count has two values: In the first place, it serves to indicate whether a septic focus is present, and roughly its severity; second, a series of counts on the same individual gives a measure of the progress in response to the exhibition of therapeutic measures or to natural healing.—DR. W. P. KENNEDY, in *The Prescriber*, Nov., 1930.

Control of Conception

Histories which disprove many of the common accusations against birth control are in our hands. These seem to show that:

1.—*The usual methods are harmless.* It is the little-used intrauterine stem and an abandoned German practice that have done the damage.

2.—*Production of sterility is not proved.* Evidence is lacking, in our six-year hunt for case records, of sterility from methods other than the intrauterine stem.

3.—*The methods are reasonably effective.* Clinically approved methods show ninety-five percent protection, which compares well with medical treatment of other sorts.

4.—*Women do not shirk motherhood.* They come to clinics usually after four pregnancies, with three living children; nearly half have four or more living. This applies to England, Germany, Sweden and Russia, as well as to America.

Three of the great strides of medicine are toward: Control of pain in labor and operation; control of infection in obstetrics and surgery; control of communicable disease.

These three advances, made in the face of opposition and indifference on the part of the organized profession, are now its common pride and glory.

A fourth control, control of conception, needed to safeguard life and health and happiness, though now suspect and maligned, will take its place of honor with these others. Cour-

age and wisdom were required to restrain the forces of disease and death. A greater courage and a higher wisdom are called for within our profession to undertake a guiding part in the control of life.—DR. ROBERT L. DICKINSON, abst. from *Birth Control Review*, Jan., 1931.

Care of the Indigent Sick by Medical Society Contract

In *Bull. A. M. A.*, Dec., 1930, Dr. Robt. L. Parker, of Des Moines, gives particulars of the method of treating the indigent sick in Iowa. In 11 counties of Iowa, either the entire county society or the members residing in certain portions of the county have incorporated for the purpose of entering into a joint contract with the county supervisors to render specified medical care to the county paupers of a given territory for a fixed annual sum.

Despite variations in these contracts, the plan has worked well and seems highly satisfactory from the point of view of the medical profession, of the physicians participating in the contract, and of the county supervisors. It provides for the patient choosing his own physician and thus removes one of the objectionable features of State Medicine.

The fees are collected by the contracting corporation and are distributed in such way as the members think fit, being applied either for organization or society purposes or in payment of the scrutinized bills rendered by individual members under the contract. The average is about $100 per annum per contract society member.

Meddlesome Gynecology and Obstetrics

In *Ohio St. M. J.*, Nov., 1930, Dr. J. O. Polak, of Brooklyn, calls attention to the cost of meddlesome fads and fancies in gynecology and obstetrics. Among other items he mentions pelvic inflammations and birth injuries.

Regarding pelvic inflammations, Dr. Polak says that contraction and retraction of the normally placed uterus is the greatest protection against infective invasion. If infection can be kept within the confines of the uterus the therapy is simple. Gonorrhea is a self-limited process which confines its ravages to the glands about the introitus and cervix, unless meddlesome treatment carries it higher up. Study has shown that it has been impossible to recover the gonococcus for culture after there has been a subsidence in the temperature and leukocytosis for a period of 2 weeks. How then is it conceivable that men will continue to open the abdomen and remove acutely inflamed tubes, frequently with the contiguous ovary, and castrate women, when nature is competent, in many cases, to take care of the inflammatory process and produce, not only a symptomatic but a histologic cure?

As regards birth injuries, they can be minimized. First, by the preservation of the bag of waters until full dilation is accomplished; second, by the judicious use of anodynes and anesthesia during the first stage of labor; third, by never attempting intravaginal operative procedures before there is complete preparation of the soft passages; fourth, by avoiding the use of pituitary extract until after the child has been born; fifth, by employing a modified Walcher posture during the perineal stage; finally, by the judicious use of anesthetics during the second stage.

Postpartum parametritis, lochiometra and thrombophlebitis are realities which occur as the result of surgery upon the cervix immediately after labor. This does not mean that such operations should not be done, but it does mean that they are strictly a hospital operative procedure for the expert obstetrician, not the casual general practitioner house operator.

Food Sensitization in Allergic Rhinitis

In *J. Allergy*, Jan., 1931, Drs. G. Piness and H. Miller, of Los Angeles, Calif., say that, of 1971 individuals who complained of symptoms which might be considered characteristic of allergic rhinitis, all except 484 had symptoms of other allergic manifestations. Allergic rhinitis is, therefore, frequently associated with other allergic conditions commonly caused by food sensitization, and is generally perennial in its manifestations.

Allergic rhinitis is associated frequently with positive reactions to foods, in addition to positive reactions to pollens, and in many instances with positive reactions to foods alone.

The authors feel that the essential import of food sensitization, in individuals suffering from allergic rhinitis, is no different from that of pollen sensitization or epidermal sensitization. In any or all of these, they are impressed with the fact that, in a given allergic individual, the appearance of symptoms is dependent upon the sum of the doses of all the allergens to which he is sensitive. In view of this summation effect, it follows that in treatment he must be protected against all possible factors, whether food, pollen or epidermal.

Calcium and Parathyroid Therapy in Chronic Ulcerative Colitis

In *Am. J. Med. Sc.*, Feb., 1931, Drs. B. Haskell and A. Cantarow, of Philadelphia, present an experimental and clinical study of the nonspecific form of chronic ulcerative colitis. The experimental studies include the determination of the diffusibility of calcium in 6 patients with mucous colitis, 2 with spastic colon and 7 with chronic ulcerative colitis. The clinical study consists of the observation of 13 patients with chronic ulcerative colitis, with particular reference to the effects of calcium and parathyroid therapy.

The general study suggests that, in a number of cases, the ulcerative lesions are secondary to a long-standing mucous colitis.

The rationale of calcium and parathyroid therapy in ulcerative colitis rests upon the beneficial effect of calcium on the following existing conditions: (a) nutritional change in the tissues, with or without a disturbance of calcium partition; (b) spasticity of the colon; (c) hemorrhage.

Calcium lactate or gluconate, by mouth, and parathyroid extract, intramuscularly, were ad-

ministered to a group of 13 patients with ulcerative colitis. Eleven became clinically well in from four to eight weeks. Ten of these were observed over a period of from one to two and a half years. The mucosa of the lower bowel resumed a normal appearance in 8. Return of symptoms for a short period occurred in 2.

The clinical and anatomic improvement, which followed rather promptly the administration of calcium and parathyroid to patients with ulcerative colitis, after other forms of therapy had been unsuccessful in several of them, seems to warrant the continued use of and further observation on the effects of this form of treatment.

Impressions of American Medicine

In *Practitioner*, Lond., Dec., 1930, Dr. R. S. Stevenson, gives his impressions following a short visit to some of the important American medical centers.

Dr. Stevenson says that the surgical work he saw was good, though no better than that in England, but better organized, better presented, better indexed.

There are 120,000 doctors in the United States, many of whom were graduated from medical schools which have been deservedly shut down by force of public opinion. It cannot be pretended, in Dr. Stevenson's opinion, that the *average* American practitioner is of the caliber of the average practitioner in Britain or even of most other European countries. But with the encouragement of the high standards indicated in this article, medicine in America is obviously in the ascendant.

Regarding medical education in America, Dr. Stevenson quotes Dr. W. J. Mayo as saying that the pendulum has swung from the poor medical school, with its one virtue of teaching clinical medicine, to the splendid medical schools of today, which place less emphasis on clinical and bedside instruction and stress rather education for education's sake, "while the purpose of medical education, the relief of the sick, is almost forgotten."

Infective Bone Lesions of the Fingers

The presence of periostitis, osteitis or osteomyelitis is an indication to many for the use of the curette, with all its disastrous consequences, or even for immediate amputation.

As the result of observation of some personal cases, Dr. L. M. McKim, of Montreal, in *Canadian M. A. J.*, Nov., 1930, finds that:

1.—Bone changes, due to infection and demonstrable by x-rays, occur earlier in the terminal phalanx of the finger than elsewhere in the body.

2.—The presence of a bony lesion, demonstrable by x-rays or by operation, does not necessarily mean that sequestration will occur.

3.—If, and when, sequestration does occur, the loss of even a large portion of a phalanx does not necessarily call for sacrifice of the finger.

Conclusions Drawn from 1,000 Forceps Deliveries

As given in *Bull. Johns Hopk. Hosp.*, Dec., 1930, the practical conclusions drawn by Dr. H. J. Stander, from 1,000 consecutive forceps deliveries in the Johns Hopkins Hospital, from 1917 to 1929 are as follows:

1.—Low-forceps constitutes over 80 percent of all forceps deliveries, while high-forceps was performed in less than 2 percent of the cases.

2.—Uterine inertia or prolonged second stage of labor accounts for over half the forceps operations.

3.—Forceps delivery is necessary four times more frequently in primiparous than in the multiparous patients.

4.—Contracted pelvis occurs more than twice as frequently in the colored as in the white patient. It is a considerable factor in the indications for forceps.

5.—The gross fetal mortality incident to forceps delivery is 10 percent.

6.—The fetal mortality in colored primiparas is 17.4 percent, and constitutes the most important single factor in the production of the high gross mortality in forceps delivery.

7.—The fetal death rate is definitely increased by failure of rotation in posterior presentations, and is particularly high where the head is arrested in deep transverse position.

8.—The duration of labor is a very important factor in increasing the fetal mortality incident to forceps delivery. After 48 hours, the fetal death rate becomes excessively high.

9.—Only one-fifth of patients delivered by forceps had no perineal lacerations. As tears are far more frequent in primiparas, primiparity may be an argument in favor of routine episiotomy.

10.—Our experience shows that the colored woman is about twice as poor a risk, as to both morbidity and mortality, as is the white patient.

11.—The cephalic application of the blades is essential to the proper performance of forceps delivery. The high incidence of obliquely posterior and of deep transverse presentations makes it inadvisable to apply the blades to the sides of the pelvis; and it is to neglect of this precaution that the great dread of such presentations is due.

12.—The fetal heart *in utero* does not always afford satisfactory information as to the condition of the child, and this should be borne in mind, especially when forceps are applied in women who have been in labor for more than 36 hours.

13.—The fetal mortality is higher in primiparas than in multiparas; and this is particularly true for forceps delivery in the young primipara under 20, as well as in the elderly primipara over 35 years of age.

14.—From the considerations here adduced, it is apparent that the conservative use of the forceps is a means of saving the lives of many infants, but nevertheless, the fetal mortality is higher than is usually appreciated.

NEW BOOKS

He that loveth a book will never want a faithful friend, a wholesome counsellor, a cheerful companion, an effectual comforter.—ISAAC BARROW.

Kitchens: Differential Diagnosis

SYMPTOMS AND DISEASES APPLIED: Questionnaires; Differential Diagnosis; Mathematical Diagnosis. *By W. L. Kitchens, M.D. Texarkana, Texas: Helms Printing Company.* 1930 *Price* $10.00.

This should be a very valuable reference book for the average practitioner in arriving at a positive diagnosis.

The author has listed 496 symptoms and 416 diseases. Diseases are alphabetically arranged and consecutively numbered. Under each disease is a list of all symptoms which are commonly observed or may occur in it. These symptoms are also numbered, the same number always representing the same symptom.

There is also a numerical list of symptoms and signs, arranged by regions of the body, and each symptom followed by a list of the diseases in which it may occur.

According to the author's system, as described, the symptoms and signs noted at the patient's examination (both clinical and laboratory) are put down. Then by the easy method of cross reference the diseases in which these symptoms occur are easily found and, by a process of elimination, a differential diagnosis is quickly reached. The author claims that, if the clinical elicitation of symptoms is done thoroughly, two or more different physicians must of necessity arrive at the same diagnosis if they follow the system of elimination devised in this book.

While this system in general is the method followed by the best clinicians, the arrangement in Dr. Kitchen's book has the distinct merit of crystallizing, in a manner not hitherto presented, the tedious process and enabling the end to be arrived at systematically and quickly.

For the student and young practitioner (as well as for the more mature doctor) this system offers an excellent guide to correct diagnosis, following the complete examination which should always be made when a condition is not evident, and this book should prove a valuable addition to any physician's library.

Da Costa: Papers and Speeches

SELECTIONS FROM THE PAPERS AND SPEECHES of *John Chalmers Da Costa, M.D., L.L.D., Samuel D. Gross Professor of Surgery, Jefferson Medical College, Philadelphia. Philadelphia and London:* W. B. *Saunders Company.* 1931. *Price* $6.50.

The title of this delightful book may be rather misleading. It is not the usual dry reading of the "collected papers" type; not the technical descriptions of surgical procedures; but a series of charming and erudite essays, biographical, descriptive, contemporaneous, retrospective and reminiscent, related in a piquant and alluring style which draws the reader on with all the charm of a good novel.

Dr. Da Costa writes graphic accounts of old medical Paris and old medical Philadelphia; he gives life-like pictures of Drs. Gross and Keen and other celebrities. Every essay is garnished with the culture and extensive knowledge of the distinguished author. But above all he writes as a surgeon and as an observant and discerning physician who has seen things "then and now" and who is appreciative of the advances made by medical science during his lifetime.

This is a book which can be heartily recommended to every medical man, who will find in every page pleasure and relaxation. The essays can be read again and again and one will not grow tired of them. They mirror the professional and social life of a cultured and distinguished American surgeon.

Bailey: Science of the Soul

THE SOUL AND ITS MECHANISM. (The Problem of Psychology.) *By Alice A. Bailey, Author of "Letters on Occult Meditation," "Initiation, Human and Solar," "A Treatise on Cosmic Fire," etc. New York City: Lucis Publishing Co.,* 11 *West* 42*nd Street.* 1930. *Price* $2.00.

In its older, etymologic meaning, psychology is the science of the soul. The author of this highly interesting book defines it as "the science of the activity of man, as a living organism, in the environment in which he finds himself . . . the science of human conduct." The Century Dictionary defines the soul as "the principle of life, feeling, thought and action in man, regarded as a distinct entity separate from the body." It would seem that a true understanding of psychology calls for a study of both views.

This book is a decidedly sucessful attempt to bring together the views of Western science (which tends to be highly mechanistic) and Eastern mystical philosophy (which tends to be too strictly "other-worldly"), so that each may throw light upon the other and lead us to that desirable point where the two coalesce.

The author has stated both viewpoints with commendable impartiality, showing the strength and the weakness of each and calling upon sincere students of the Orient and the Occident to

study each other's philosophies with an open mind.

She feels that the East has made a deeper study of the nature and mechanism of that inner entity—that *something* which knows and says, "*I am*"—which we may call the Self, the Ego, the Soul, or what we will, and that we of the West should profit by their knowledge and carry it further. She also feels that we have. by our studies of the endocrine glands and the nervous system, come close to an appreciation of the physical apparatus through which the soul manifests directly in the physical world, and that the East would do well to assimilate the results of our researches.

If we, in reading about the "force centers," which are so real to the oriental philosopher, find the idea a bit intangible and bizarre, we must remember that when he reads about our studies of the endocrines, they sound equally strange and unprofitable to him.

Thinkers, who have a real desire to understand the mechanism of a human being, will find this sane, sensible, well-balanced volume a treasure, which will bring them a step or two nearer to understanding the Mystery.

Davies: Syphilis in the Female

PRIMARY SYPHILIS IN THE FEMALE. By *Thomas Anwyl Davies, M.D. (Lond.), Director of The Whitechapel (L.C.C.) Clinic, Late M.O. in Charge, and Late S.M.O. of The Venereal Department at St. Thomas's Hospital, S.E.I. Thesis Approved for the Degree of Doctor of Medicine in the University of London (Gold Medal). New York and London: Oxford University Press, Humphrey Milford.* 1931. *Price* $4.00.

The author has had considerable experience in handling syphilis in women at one of the large venereal clinics in London. His views, based on the observation of the facts as they presented themselves, differ in several matters from those in standard works on syphilis, such as that of Fournier. Thus the primary chancre was internally situated, and not on the labia, in 45 percent of the cases, and the most frequent site for the internal primary chancre was on the cervix.

Syphilologists and, to a less extent, practitioners will find much interesting matter in this well-made little work, which is in the form of a thesis. There are a number of excellent original illustrations, several of which are in color.

Lovett: Curvature of the Spine

LOVETT'S LATERAL CURVATURE OF THE SPINE AND ROUND SHOULDERS. *Revised and Edited by Frank R. Ober, M.D., Assistant Professor of Orthopedic Surgery Harvard University, Member American Orthopedic Association and A. H. Brewster, M.D., Instructor of Orthopedic Surgery Harvard University; Member American Orthopedic Association. With Two Hundred and One Illustrations. Philadelphia: P. Blakiston's Son & Co., Inc.* 1931. *Price* $3.50.

Since its first issue, more than 70 years ago, Dr. Lovett's book on lateral curvature of the spine has been a standard work on the subject dealt with, as regards treatment, more especially from the standpoint of mechanical orthopedics.

The present, the fifth edition, has been thoroughly revised and includes all new treatments or modifications found by experience to have value. This is a volume which every general practitioner will find most profitable to have on his bookshelf, owing to the wide prevalence of congenital and acquired spinal deformities.

Williamson: Diseases of Children

A HANDBOOK ON DISEASES OF CHILDREN; Including Dietetics and The Common Fevers. *By Bruce Williamson, M.D., Edin., M.R.C.P., Lond., Physician To The Royal Northern Hospital, London, Asst. Phys. To The Prince of Wales General Hospital, London, Lecturer in Medicine, N.E. London Post-Grad. College, Formerly Senior President, Royal Medical Society, Edinburgh, etc. New York: William Wood and Company.* 1931. *Price* $3.50.

The author presents a concise but reasonably complete account of the diseases and disorders peculiar to infancy and childhood, suitable for students and for general practitioners who desire to become better acquainted with pediatrics that the ordinary medical course allows.

By some curious error, the same picture is used to illustrate two different conditions, on pages 30 and 88.

Hodson: Health and Spiritual Life

HEALTH AND THE SPIRITUAL LIFE. *By Geoffrey Hodson. With an Introduction by Lady Emily Lutyens. London: Theosophical Publishing House.* 1930. (*Through the Theosophical Press, Wheaton, Ill.*, $0.30.)

This small booklet is characteristic of the health instruction ordinarily given to students of more or less formalized occultism.

The comments on psychic and hygienic factors in illness are in accord with modern ideas, except that the author is a raw food enthusiast. As is to be expected, the use of drugs, especially those of animal origin, is deplored.

Few physicians will find much of value here.

Pitkin: Rapid Reading

THE ART OF RAPID READING. A book for people who want to read faster and more accurately. *By Walter B. Pitkin, Professor in Journalism, Columbia University. New York: Whittlesey House, McGraw Book Company, Inc.* 1929. *Price* $2.50.

There are three reasons for reading: to increase one's knowledge or culture or both; to amuse oneself; to keep abreast of the march of world events, in general and in regard to one's vocation. The first two types have their own technic, which differs widely. This book is intended to improve one's technic and efficiency in the last-named type of reading.

There are four classes of reading: light, average, solid and heavy (study). Most men's reading time is, at least, half filled with the first two

classes. This book should increase one's efficiency here. It is not an "inspirational" book, but a set of working tools which, if properly used, will produce results.

After sketching the perspective of his subject in a valuable introduction, the author devotes the rest of his 230 pages chiefly to exercises in improving one's mastery of words and one's eye-grasp. One section is devoted to the art of skimming, which is highly recommended.

Every successful physician must do an immense amount of reading along a number of lines. A careful study and use of this book should enable him to make far greater progress in the limited reading time at his disposal.

Taylor: Family Register

OURSELVES. *A Personal and Family History Register for Preserving Records of a Private and Personal Nature for One Married Couple and Their Children. Also an Appendix, Offering Remarks and Hints on the Subject of Development of Children, of Mind, Body, Character and Personality. By John Madison Taylor, A.B. (Princeton); M.D. (Univ. of Pa.), Professor of Applied Therapeutics in the Medical Department of Temple University; formerly Professor of Diseases of Children in the Polyclinic College for Graduates in Medicine; etc. Philadelphia: F. A. Davis Company.* 1917. *Price* $4.25.

The study of human genetics can scarcely make progress unless many families are willing to make complete and accurate records and permit them to be used (anonymously) for such purposes.

This rather impressive book (9x12 inches in size and substantially bound) furnishes a set of well-considered blanks for recording, in detail, the physical, emotional and mental progress and development of the members of one family, including the ascendants, as far back as the history can be traced, as well as the life stories of the direct descendants of the two parents. Pages are provided for full records of all illnesses and operations, examinations, photographs and specimens of handwriting; as well as charts for noting the progress of growth and development, the condition of the teeth, anatomic abnormalities, etc. In the back are 30 pages of suggestions on the development of mind and body.

It would be well if many physicians would learn to use such a book, sell the idea to their patients and teach them how to use it.

Osgood and Haskins: Laboratory Diagnosis

A TEXTBOOK OF LABORATORY DIAGNOSIS; With Clinical Applications For Practitioners And Students. *By Edwin E. Osgood, M.A., M.D., Assistant Professor of Medicine and Biochemistry, Director of Laboratories, University of Oregon, School of Medicine, Portland, Oregon, and Howard D. Haskins, M.D., Professor of Biochemistry, University of Oregon, School of Medicine, Portland, Oregon. With Twenty-One Figures In The Text and Six Colored Plates. Philadelphia: P. Blakiston's Son & Co., Inc.* 1931. *Price* $5.00.

Like other works of this kind, this book is the outgrowth of the outlines used by the authors as teachers of laboratory diagnostic methods.

The most valuable feature appears to be the division of the matter into two main parts. Part I is designed for the general practitioner and in it is considered that body of knowledge which he must have available at the bedside of his patient. It gives information regarding those laboratory procedures which will aid in arriving at a correct diagnosis.

Part II is more suitable for the laboratory technician, including the physician who wishes to pursue the more special tests. This gives the various approved, up-to-date methods of investigating normal and pathologic body fluids and tissues.

In addition to the usual copious index, there is an index by diseases which would serve as a guide for the practitioner in dealing with the laboratory tests associated with disease entities. The type, paper and arrangement are excellent.

The book should be very valuable to students, as it includes all the latest approved procedures, as well as to the general practitioner who performs his own laboratory tests.

Haultain & Fahmy: Antenatal Care

ANTE-NATAL CARE; Including the Abnormalities Associated with Pregnancy and a Section on Post-Natal Care. *By W. F. T. Haultain, O.B.E., M.C., B.A., M.B., (Camb.), F.R.C.S.E., M.R.C.P.E., M.C.O.G., Senior Assistant Obstetric Physician, etc., and E. Chalmers Fahmy, M.B. (Edin.), F.R.C.S.E., M.R.C.P.E., M.C.O.G., Assistant Obstetric Physician and Special Assistant to Ante-Natal Department, etc. With Foreword by Professor R. W. Johnstone. Second Edition. New York: William Wood & Company. Edinburgh: E. & S. Livingstone.* 1931. *Price* $2.25.

Though small, this is a very complete and practical little treatise on the antenatal care of pregnant women. All that any obstetrician needs to know for the examination and guidance of such women is included in it.

Romanis: Surgical Emergencies in Practice

SURGICAL EMERGENCIES IN PRACTICE. *By W. H. C. Romanis, M.A., M.B., M.Ch. (Cantab.), and Philip H. Mitchiner, M.D., M.S., (London). 158 Illustrations. New York: William Wood & Company.* 1931. *Price* $6.00.

The title of the book is not appropriate for the work. It conveys, at first blush, the idea that it is a work like Lejar's "Emergency Surgery." This, however, is not the case.

The subject matter here discussed can be found in any standard textbook on surgery. However, as an abbreviated text on surgery, this book has certain merits. The chapter on fractures is particularly well written.

On page 251, a dissertation is entered into on the various forms of arthritis, (typhoid, pneumococcal, gonococcal, influenzal and dysenteric synovitis, etc.), and a number of similar matters, such as bedsores, erysipelas, artificial limbs, etc., are dealt with. It takes a considerable stretch of the imagination to consider these

conditions as emergencies requiring immediate intervention. As a rule, in conditions like these, the physician has sufficient time to deliberate on the case, for the purpose of instituting proper therapy.

A number of emergencies are, however, ably discussed, (shock, hemorrhage, burns, urgent conditions of the respiratory passages and throat, and acute urine retention). Information on these is also easily available in every modern text on the subject.

The question arises, is it necessary to write a special volume on subjects that the average text of surgery discusses thoroughly? M.T.

Braithwaite: Infant Feeding

INFANT FEEDING IN GENERAL PRACTICE. *By J. V. C. Braithwaite, M.D., M.R.C.P. (Lond.), Physician, and Physician in Charge of Children Out-patients, Leicester Royal Infirmary and Children's Hospital; late Assistant Physician, Queen's Hospital for Children, London; etc. With a Foreword by H. C. Cameron, M.A., M.D. (Cantab.), F.R.C.P. New York: William Wood & Company. 1930. Price* $1.75.

This little handbook is intended for general practitioners who are not pediatricians, but a large part of whose practice necessarily deals with young children.

The author is himself a general practitioner, who has been associated for a long time with the children's department of a large hospital.

All the modern scientific aspects of infant feeding are discussed from the practical viewpoint.

Henderson: Blood

BLOOD. A Study in General Physiology. *By Lawrence J. Henderson, Professor of Biological Chemistry in Harvard University. New Haven: Yale University Press. London: Humphrey Milford, Oxford University Press. 1928. Price* $5.00.

This book is an expanded form of the Silliman Lectures, delivered at Yale University during 1928.

The physiology of the blood, based on its physical, chemical and general biologic phenomena, is dealt with from purely scientific and laboratory aspects. Physio-pathology is only touched upon and hence the volume will be interesting to biologists and general students of science, rather than to medical practitioners.

As a scientific treatise on the subject it should take a foremost place.

Surgical Clinics of North America

THE SURGICAL CLINICS OF NORTH AMERICA. *Chicago Number. Volume 11, Number 1, February, 1931. Philadelphia and London: W. B. Saunders Company. Issued serially, one number every other month. Per Clinic year, February, 1931 to December, 1931: Paper* $12.00; *Cloth* $16.00.

The Feb., 1931 number of the *Surgical Clinics of North America* is devoted to clinical contributions from Chicago surgeons, there being 29 papers.

Dr. A. D. Bevan opens with the description of a series of cases illustrating the principles of laparotomy.

Among the other contributions the following may be signaled as of general clinical interest: "The Comparative Value of Intravenous and Retrograde Pyelography", by Dr. R. H. Herbst; "Neuralgias of the Cranial Nerves", by Dr. Percival Bailey; "Posterior Dislocation of the Hip with Fracture of the Posterior Rim of the Acetabulum", by Dr. F. Christopher; "Deflection of the Nasal Septum", Dr. T. W. Lewis; "Acute Hematogenous Osteomyelitis in Children" and "Thrombocytopenic Purpura treated by Splenectomy," by Dr. B. Portis; "Treating Varicose Veins by the Injection Method" by Dr. E. L. Cornell; "Primary Carcinoma of Prostate" and "Undescended Testicle," by Drs. R. S. Eisenstaedt and T. G. McDougall.

This is a particularly good number of the Clinics.

Social Work Yearbook

SOCIAL WORK YEAR BOOK 1929. *Editor Fred S. Hall, Assistant Editor Mabel B. Ellis. New York: Russell Sage Foundation. 1930. Price* $4.00.

The *Social Work Year Book*, published by the Russell Sage Foundation, is designed to meet the need for accurate, readily accessible information on social work and its related fields in the United States. It is published in order to aid persons who need to use data showing social trends and social forces at work.

One hundred and ninety-seven (197) authorities contribute signed articles dealing with the history and activities of social organizations with which these writers are associated. These articles comprise Part I of the Volume.

Part II contains a comprehensive descriptive roster of 455 national agencies operating in the field of social service.

This year book, which will be in active service until the middle of 1932, should be of immense value to all those, including physicians, engaged in health, social welfare and in general social progress. There has been great need of such a comprehensive and authentic epitome of organized social endeavor in this country.

Medical Clinics of North America

THE MEDICAL CLINICS OF NORTH AMERICA. *Chicago Number, Volume 14, Number 5, March, 1931. Philadelphia and London: W. B. Saunders Company. Price, per Clinic year, July, 1930 to May, 1931: Paper* $12.00, *Cloth* $16.00.

The March, 1931, number of the *Medical Clinics of North America* is devoted to Chicago clinics. There are 31 papers from 25 clinics and they are distinguished by pertinency and brevity rather than by the prolixity which sometimes makes such purely clinical disquisitions more suitable for a review journal.

Dr. Julius H. Hess contributes a good paper on the Purpuras of Children, a subject which has not received the clinical attention it deserves. Rheumatic Fever, Subacute Bacterial Endocarditis and Focal Infection are treated by Dr. J. R. Gerstley, on the basis of a case in

which these conditions were associated. A timely paper on Ringworm Infections of the Skin is contributed by Dr. C. J. White, based on over 300 observed cases.

Other clinical presentations of general interest are "Pleurisy with Effusion," by Dr. E. K. Kerr; "Some Cases of So-Called 'Recurrent Thyrotoxicosis,'" by Dr. W. C. Buchbinder; "Leukemias and Leukemic-like Conditions," by Dr. C. S. Williamson and "Intestinal Obstruction," by Dr. F. M. Drennan and associates.

It is satisfactory to note that some of the younger clinicians have had the opportunity of publishing their observations in this issue. It is all to the good that such encouragement be given.

Reitman: The Pimp

THE SECOND OLDEST PROFESSION. A Study of the Prostitute's "Business Manager." *By Ben L. Reitman, M.D. New York: The Vanguard Press.* 1931. *Price* $3.75.

The literature on prostitution is large and varied, but this is the first book we have seen on that indispensable ally and support of the "oldest profession," the prostitute's business manager or pimp.

Dr. Reitman's experience has been unique and qualifies him to treat his subject with force and directness and from intimate personal knowledge of the people about whom he writes. He speaks with conviction and simplicity, calling spades spades, without giving offense to any sincere and right-minded reader.

The conditions set forth in this volume will be a tremendous shock to people who have been emulating the ostrich (if any such ever chance to see it), but it is a wholesome thing to know the truth about certain maladies of society which are generally hidden; and one strongly feels that here are the facts, unvarnished.

This work should prove decidedly helpful and interesting to social workers, health officials and physicians who have a leaning toward sociology.

Watson: Handbook for Senior Nurses and Midwives

A HANDBOOK FOR SENIOR NURSES AND MIDWIVES. *By J. K. Watson, M.D. (Edin.), Late House-Surgeon, Essex and Colchester Hospital and Assistant House-Surgeon, Sheffield Royal Infirmary and Sheffield Royal Hospital. Second Edition. London and New York: Humphrey Milford, Oxford University Press.* 1931. *Price* $4.00.

This handbook, which has now run to a second edition, has been designed by the author to supply senior nurses, both surgical and obstetric, with a more complete knowledge than is obtained in the more elementary and systematic books available.

The volume is divided into five parts—medical, surgical, pediatric, obstetric and gynecologic. The information is very complete and the language is free from unnecessary technicalities.

Bumm: Hernia of the Abdominal Wall

DIE AUSSEREN ABDOMINAL-HERNIEN. *Von Dr. Erich Bumm, Assistent an der Chirurgischen Universitätsklinik, Berlin. Mit 234 teils farbigen Bildern. Berlin & Wien: Urban & Schwarzenberg.* 1931. *Price geh. RM* 40.—*geb. RM* 42.50.

Dr. Bumm, who is an assistant surgeon in the University Surgical Clinic, Berlin, writes of external abdominal hernias and their treatment in a comprehensive and practical manner. The various methods practised in Germany are described and excellently illustrated, many of the pictures being in color. The volume should be of much value to physicians and surgeons who read German.

Partridge: Bacteriology

AIDS TO BACTERIOLOGY. *By William Partridge, F.I.C., Joint Public Analyst for the County of Dorset and the Boroughs of Poole and Penzance; Public Analyst and Official Agricultural Analyst for the County Borough of Burton-Upon-Trent; Vice-President of the Society of Public Analysts; etc. Fifth Edition. New York: William Wood and Company.* 1931. *Price* $1.75.

A handbook of the student's aids series, which may be used profitably by students preparing for examination. This fifth edition has been brought up to date.

Johannessohn: Quinine

CHININ IN DER ALLGEMEINPRAXIS; Unter Berücksichtigung Pharmakologischer Befunde. *Von Dr. Med. Fritz Johannessohn, Mannheim. Mit Drei Bildnissen. Amsterdam-W.: Bureau Tot Bevordering Van Het Kinine-Gebruik.* 1930. *Gratis on request.*

An interesting monograph regarding the history of quinine and its therapeutic applications and effects. It contains an extensive bibliography (more than 600 references), and to those who read German and are interested in this medicament it should be very useful.

Pfitzner-Henckel: Dissections

LEITFADEN FUR SITUSÜBUNGEN AN DER LEICHE. Zum Gebrauche bei Demonstrationen und Repetitionen. *Ausgearbeitet von weil. Dr. med. W. Pfitzner, Professor der topographischen Anatomie und Prosektor des anatomischen Institutes an der Universität Strassburg. Siebente Auflage von Dr. Med. K. O. Henckel, Professor der Anatomie an der Universität Freiburg i. Brsg. Leipzig und Wien: Franz Deuticke.* 1931. *Price* M. 1.40 S. 2.40

This primer will be found useful for demonstrators or students in the dissecting room, if they read German.

MEDICAL NEWS

Passing of Dr. Baer

A serious loss to medical research was occasioned by the untimely death, on April 7, 1931, of the widely known orthopedist, **Dr. William Stevenson Baer,** of Johns Hopkins University Medical School, Baltimore.

Dr. Baer's outstanding work in the Children's Hospital School has been recognized for years, but his name has recently been brought into especial prominence by his introduction of the use of live maggots in the successful treatment of osteomyelitis. Researches were in progress to determine whether this method could be applied to other diseases, and encouraging progress was being made. His colleagues will carry on the work.

The Doctor, who was only fifty-nine years old, succumbed to a paralytic stroke.

The picture above is reproduced from a portrait recently painted by the English artist, Harold Knight, by order of the board of trustees of the Children's Hospital School, Baltimore, and is used by courtesy of the School and of the *Survey-Graphic.*

Postgraduate Clinics in Chicago

The summer clinics at the Cook County Hospital, sponsored by the Chicago Medical Society, have proved so popular that they are being offered again this year—June 22 to July 3.

Write to the Society, at 185 N. Wabash Ave. for particulars and *make reservations promptly,* as the number of attendants is limited.

A. M. A. Meeting

The annual meeting of the American Medical Association will be held in Philadelphia, Pa., June 8 to 12, inclusive, 1931. Every physician who possibly can do so should attend this meeting, to keep himself in touch with the things that are being done in Medicine, and people who are doing them. Hotel reservations should be made *at once.*

The *American Heart Association* will meet on Tuesday, June 9, and the *Association for the Study of Internal Secretions* will hold its meeting during the same week. Full information obtainable from the Am. Med. Assn., 535 N. Dearborn St., Chicago.

European Postgraduate Courses in English

During the summer of 1931, postgraduate courses will be conducted, in English, in a number of the clinics and hospitals of Paris, France. These will cover a wide variety of topics and will be given by leading French clinicians. Small fees will be charged for each course taken and a certificate will be issued.

Those who are going to Europe this summer, or who yearn for such instruction, will do well to arrange for taking one or

more of these courses. They can find out all about them by writing to Dr. Frank Smithies, 920 North Michigan Ave., Chicago, Ill.

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Carrel Receives Prize

Dr. Alexis Carrel, of the Rockefeller Institute, recently received the Nordhoff-Jung prize and diploma, for researches in the treatment of cancer. This is the first time this honor has been won by an American. The presentation was made, with appropriate ceremonies, at the Georgetown University, Washington, D. C.

Doctor Publishes Book of Verse

Dr. James A. De Moss, of Thayer, Kansas, is the author of a recently published book of verses, dealing largely with medical subjects. Poems to the lungs and the internal carotids are rather an innovation.

Dr. Thorek Honored

Dr. Max Thorek has recently been made an honorary corresponding member of the Egyptian Medical Association, Cairo.

European Tour

The Chicago Medical Society has arranged a European tour for physicians and their families, which will provide a delightful and profitable vacation, combined, if desired, with opportunities for making professional contacts abroad. The party will sail from New York June 13, immediately after the close of the A. M. A. meeting in Philadelphia, leaving Liverpool for the return trip on July 31.

Full details may be obtained from the Chicago Medical Society, 185 North Wabash Ave., Chicago, Ill.

Dr. Kagan on Hebrew Literature

Dr. Solomon R. Kagan, of Roxbury, Mass., who is also a Rabbi of the Jewish Church, has recently published an interesting little book entitled, "Researches in Hebrew Literature," fully one-third of which is devoted to a discussion of Medicine, as described in the ancient Jewish writings.

Unemployment and Tuberculosis

Dr. S. Adolphus Knopf, of New York (16 W. 95th St.), believes that tuberculosis is a definite factor in the unemployment situation and presented his views before the Society of Medical Jurisprudence, N. Y. C. This address is published in a brochure, which the author will be glad to send to those seriously interested.

Verses by Mrs. Hollen

Another book of verses, "The Vintage," by Aura May Hollen, wife of Dr. Henry Hollen, of Hollywood, Calif., has made its appearance recently.

United States Civil Service Examinations

The United States Civil Service Commission has announced that a vacancy exists in the position of physician qualified in tuberculosis, in the Regional Office of the United States Veterans' Administration, at Dallas, Texas.

A man is desired for the appointment. The entrance salary is $3,800 a year. Higher-salaried positions are filled through promotion.

Full information may be obtained from the Secretary, Board of United States Civil Service Examiners, post office or customhouse, any city, or from the United States Civil Service Commission, Washington, D. C.

Send For This Literature

To assist doctors in obtaining current literature published by manufacturers of equipment, pharmaceuticals, physician's supplies, foods, etc., CLINICAL MEDICINE and SURGERY, North Chicago, Ill., will gladly forward requests for such catalogues, booklets, reprints, etc., as are listed from month to month in this department. Some of the material now available in printed form is shown below, each piece being given a key number. For convenience in ordering, our readers may use these numbers and simply send requests to this magazine. Our aim is to recommend only current literature which meets the standards of this paper as to reliability and adaptability for physicians' use.

Both the literature listed below and the service are free. In addition to this, we will gladly furnish such other information as you may desire regarding additional equipment or medical supplies. Make use of this department.

When requesting literature, please specify whether you are a doctor of medicine, dentistry, medical student, a registered pharmacist, or a nurse.

N- 3 Storm Binder and Abdominal Supporter. 4-page folder by Dr. Katherine L. Storm.

N- 47 Campho-Phenique in Major and Minor Surgery. Campho-Phenique Company.

N- 95 Everything for the Sick. Lindsay Laboratories.

N-116 Hemo-Glycogen, The New Product Hemoglobin Compound and Liver Extract. Chappel Bros., Inc.

N-120 Building Resistance — Guiatonic. William R. Warner & Co., Ltd.

N-196 "Facts Worth Knowing." Intravenous Products Co. of America, Inc.

N-258 Prophylaxis. August E. Drucker Co.

N-269 Special Course No. VI Traumatic Surgery. Illinois Post Graduate Medical School, Inc.

N-271 The Intestinal Flora. The Battle Creek Food Company.

N-292 Acidosis and Infection—Alka-Zane, William R. Warner & Co., Inc.

N-310 Conclusions from published research of the value of Ceanothyn as a hemostatic. Flint, Eaton & Co.

N-318 Blood Clinical and Laboratory Diagnosis. A book of 160 pages by Henry Irving Berger, M.D. Battle & Company.

N-347 Graphic Chart of the Treatment of Circulatory Disturbances. Merck & Company.

N-354 Getting the Most Out of Life. Stanco, Inc.

N-374 Table for Determining Date of Delivery. The Viburno Company, Inc.

N-383 Syrup Histosan Controls the Cough in Acute and Chronic Bronchitis, Pneumonia and other Pulmonary Diseases. Ernst Bischoff Co., Inc.

N-391 Imhotep. Egyptian Medicine Was a Quaint Mixture of Rationalism and Magic — Agarol. William R. Warner & Co., Inc.

N-392 Arthritis. Its Classification and Treatment. Battle & Co.

N-401 When the Cross Roads are Reached in Hemorrhoids (Piles). Schering & Glatz, Inc.

N-402 The First Question—Agarol. Wm. R. Warner & Co., Inc.

N-404 Urotropin, the Intravenous Administration of the Original Farmaldehyde-Liberating Urinary and Systemic Antiseptic. Schering & Glatz.

N-410 Acidosis. A Warning Sign in Pregnancy—Alka-Zane. Wm. R. Warner & Co., Inc.

N-414 Laboratory Test in Pictures—Silvogan. Ernst Bischoff Company, Inc.

N-425 Cerebrospinal Fever (Epidemic, Cerebrospinal Meningitis, Meningococcic Meningitis, Spotted Fever), Symptoms and Specific Treatment with Anti-Meningococcic Serum. The National Drug Co.

N-443 AbilenA. Its Location, Discovery. Origin, Chemistry, Medicinal or Clinical Value and Uses. The AbilenA Co.

N-449 General Catalog of Medicinal Chemicals. Bilhuber-Knoll Corp.

N-455 AbilenA. The Ideal Cathartic Water. The AbilenA Co.

N-456 Science Applied to Tobacco. Health Cigar Company, Inc.

N-465 Diagnosis of Cardio-Vascular Diseases, by Henry Irving Berger, M.D. Sultan Drug Company.

N-471 Potassium Thiocynate in the Treatment of Arterial Hypertension (Primary). Sutliff & Case Co.

N-473 The New "Universal" Post Cautery. Post Electric Company, Inc.

N-478 Diatussin in the Treatment of Whooping Cough and Other Spasmodic Coughs. Ernst Bischoff Co., Inc.

N-480 The Incidence of Eczema in Skin Diseases in about 20 percent. Bilhuber-Knoll Corp.

N-481 The Breath of Life—Alpha-Lobelin. Ernst Bischoff Company, Inc.

N-490 Are Your Patients All at Sea? Detoxol Paste. The Wm. S. Merrell Company.

N-491 Announcing a New and Better Sedative—Sedormid. Hoffmann-La-Roche, Inc.

N-496 Natural Salicylates. The Wm. S. Merrell Company.

N-502 Fifty Years of Success. The Keeley Institute.

N-503 Endocrine Essentials — Ovarian Organotherapy. The Harrower Laboratory.

N-504 Bedtime Nourishment. Mellin's Food Co.

N-505 Mellin's Food—A Milk Modifier. Mellin's Food Co.

N-507 The Secret of Our Digestive Glands. J. W. Wuppermann Angostura Bitters Agency, Inc.

N-514 Definite Aids in Reducing Infant and Maternal Mortality. "Nss" Sales Company, Mfrs.

N-519 Clinical Results from Stimulated Leukocytosis by Burr Ferguson, M.D. Hille Laboratories, Inc.

N-520 Treatment of Wassermann-Fastness with Colloidal Mercury Sulphide-Hille. Hille Laboratories, Inc.

N-523 Urinary Tests and Color Charts for Practical Use in Office Diagnosis. Od Chemical Co.

N-524 Balance, the Importance of the Acid-Base Equilibrium of the Body. The BiSoDol Company.

N-525 The Treatment of Hemorrhage with Therapeutic Notes on the Use of Ceanothyn. Flint, Eaton & Company.

N-526 The Keeley Home Treatment for Tobacco. The Keeley Institute.

N-527 Elixir Angostura Amarum Siegert. Angostura Bitters in the Daily Practice. J. W. Wuppermann Angostura Bitters Agency, Inc.

N-528 Iodine Prescription Specialties (Physiologically Available FREE Iodine), Oral, Intravenous, Intramuscular, Alveolar Inhalation and Local. Burnham Soluble Iodine Co.

N-529 "A. L. A." A Remarkable Local Anesthetic. Sutliff & Case Co., Inc.

N-530 Light Therapy. Britesun, Inc.

N-533 Intra-Nasal Care of Hay Fever Cases. Dr. Edmondson's Infirmary.

N-534 "Neversslip" Navel Cord, Cord Ligature. "NSS" Manufacturers.

N-535 Vera-Perles of Sandalwood Compound. The Paul Plessner Company.

N-536 Quartz Burdick Prescription Lamps for Patients Who Cannot Come to Your Office. Burdick Corp.

N-537 The Air-Cooled Quartz Lamp Bedside Unit. Burdick Corp.

N-538 Endocrine Essentials—Gonad Organotherapy, No. 3 of a series. The Harrower Laboratory, Inc.